General Hydraulics
L2010450022/Winnebago Co.
ILD 984767806

CERCLA
Screening Site Inspection Report

Volume 1 of 2

Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

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1. INTRODUCTION

On September 24, 1991, the Illinois Environmental Protection Agency's (IEPA) Pre-Remedial Unit was tasked by the United States Environmental Protection Agency (USEPA) to conduct a CERCLA Screening Site Inspection (SSI) of General Hydraulics.

General Hydraulics was added to the Comprehensive Environmental Response Compensation and Liability Act's Information System (CERCLIS) on November 29, 1988 in response to requests for discovery by the Illinois Environmental Protection Agency (IEPA). The request was initiated after abandon, leaking drums and contaminated soils were found at the site. The site received it's initial CERCLA evaluation through a Preliminary Assessments (PA) conducted in May, 1990, by Mr. Tim Murphy of IEPA. IEPA's Pre-Remedial Unit then prepared a SSI work plan for General Hydraulics that was submitted to USEPA Region V in October, 1991. The sampling portion of the SSI was conducted on November 5 and 6, 1991 when personnel from the Agency's Pre-Remedial Unit collected sixteen samples (nine groundwater and seven soil).

The purpose of an CERCLA SSI have been stated by USEPA in a directive outline of Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical date requirements for the listing SI step. A Screening Si will not have rigorous date quality object-

> ives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA (Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (USEPA 1988)

The Region V offices of the USEPA have also requested that the IEPA identify sites during the SSI that may require removal action to remediate an immediate human health and/or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section includes information obtained over the course of the formal CERCLA SSI investigation, as well as through previous IEPA findings and a recent investigation preformed by a contractor (Warzyn) for North American Tool Corporation (NATCo).

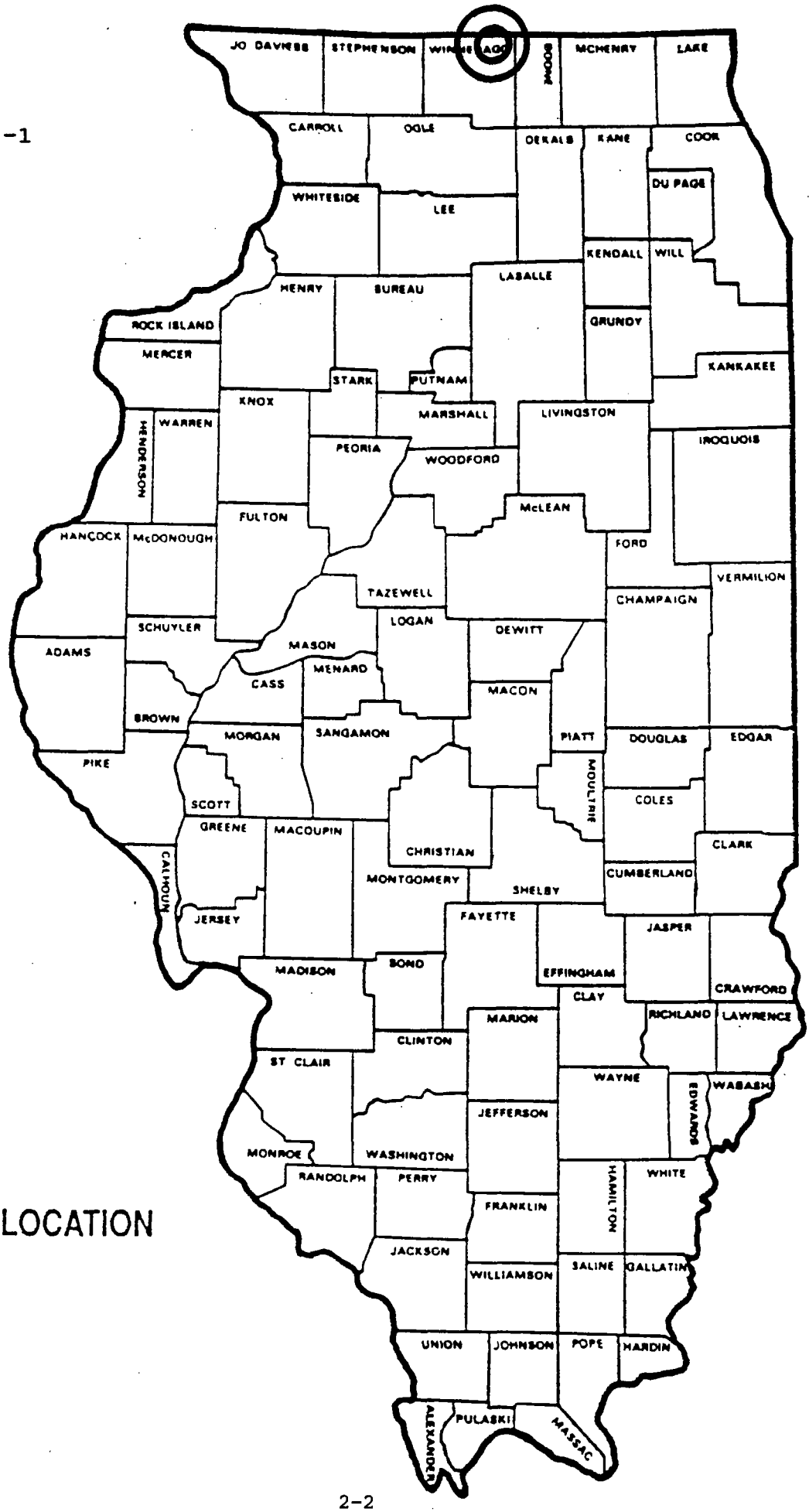
2.2 SITE DESCRIPTION

General Hydraulics is the name of a defunct business that had operated a lawn and garden equipment manufacturing facility in South Beloit, Illinois. The facility was comprised of three, one-story buildings on eight acres of land, 450 feet east of the Rock River. The facility was located in an industrial and residential area, near the center of the city (population 4,088). More specifically, the site is west of Hayes Avenue and between Charles Avenue to the north and Elmwood Avenue to the south. The legal description would include the site within the southeast quarter of Section 6, Township 46 north, Range 2 east of the Third Principle Meridian in Winnebago County. A 4-mile radius map of General Hydraulics can be viewed in Appendix A. The following page shows the site location with respect to the State of Illinois.

2.3 SITE HISTORY

Prior to General Hydraulics, the Chicago, Minneapolis, St. Paul and Peoria Railroad owned the site as part of their right-of-way. The Railroad allowed fill material to be

Figure 2-1



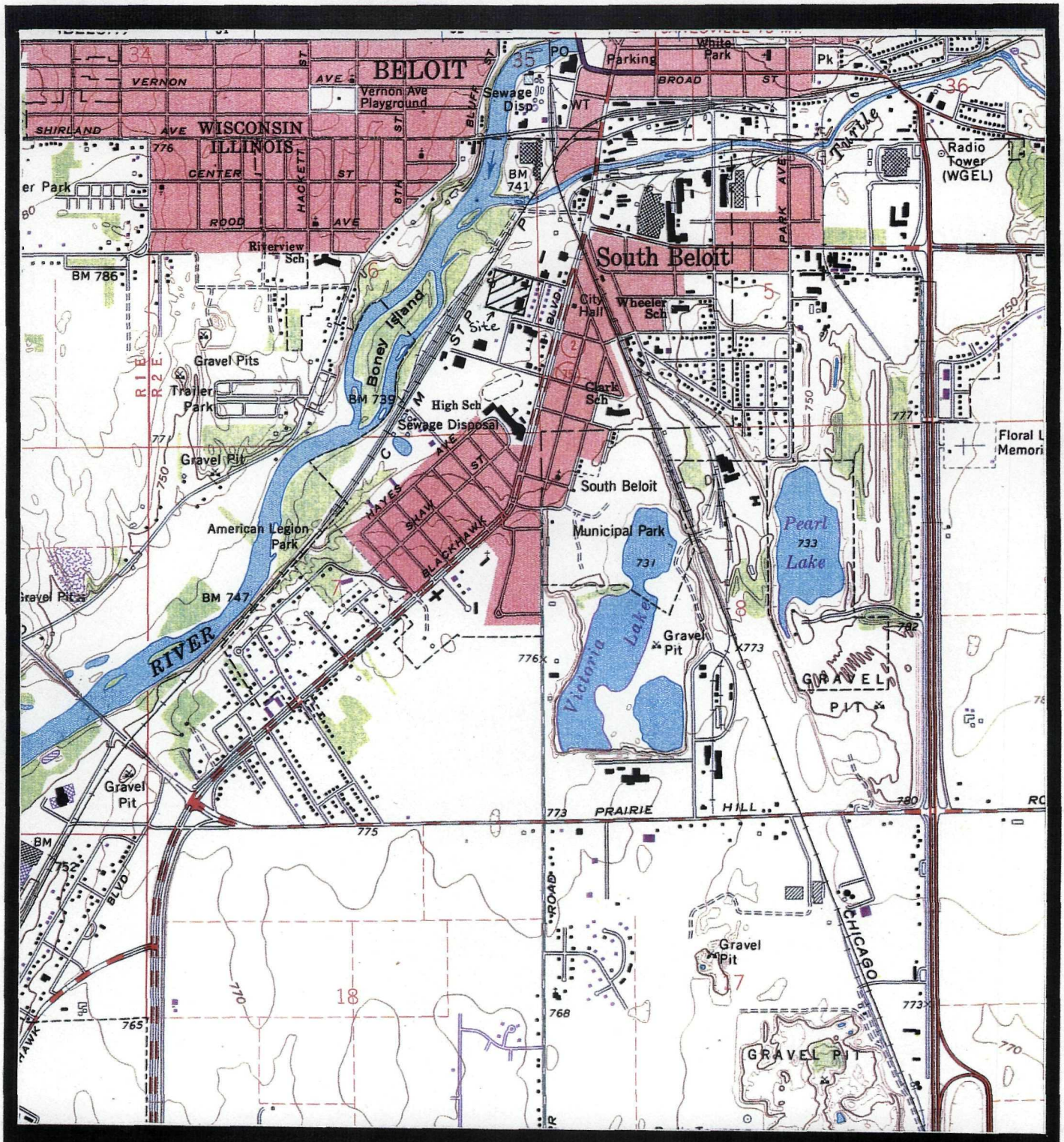
SITE LOCATION

dumped in the swampy areas of the site, thus raising the elevation by several feet in certain areas. The dumping (destroying the wetland) also helped level the site and surrounding area for future uses.

Mr. Glen Hanson began his manufacturing at General Hydraulics after he purchased eight acres from the railroad in the early 1950's. General Hydraulics built various equipment including farm sprayers, mowers and snow blowers. The three, one-story buildings at the facility served specific functions. The metal building in the northeast corner of the property, housed the fiberglass operation. Tanks and sprayers were built there. Welding and fabrication took place in the metal building west of the fiberglass operation (the northwest area of the property). The third General Hydraulics building was the masonry construction on the south end of the property. Here, Mr. Hanson had his machine shop. A site location map, Figure 2-2 on the following page, depicts the three buildings.

Much of General Hydraulics wastes were generated at the machine shop in the form of cutting oils and solvents. In April of 1981, IEPA discovered that the facility was using a Wisconsin transport company to ship wastes without manifests.

In 1984, General Hydraulics declared bankruptcy and in 1985, the bankruptcy court parceled the property for sale. One prospective buyer, Magnetic Data Carriers rescinded their purchase agreement after abandoned, leaking drums of waste and visibly contaminated soil were found at the site.



Source: IEPA, 1992 Base Map: USGS, 1976 South Beloit, Ill.-Wis.
Scale 1:24,000

Figure 2-2

SITE LOCATION MAP

IEPA inspected the site on May 2, 1986, after Magnetic Data Carriers had reported the waste left behind by General Hydraulics. At the site, IEPA discovered two separate dumping areas. At one area, a reddish-brown granular material was observed and the other area had a mixture of materials (drums, pails, wooden crates, tires, trash, etc). The entire site was littered with trash and debris. It was estimated that 112-120, 55 gallon drums and 25-50 five gallon pails had been left on-site.

The bankruptcy court contracted Frinks Industrial Waste (FIW) to sample and remove the waste. Composite samples were obtained from the drums and analyzed for corrosive, ignitability, total metals, and certain other hazardous characteristics. Nine drums were found to contain hazardous waste based on flash point. All of the drums were staged and disposed of by FIW. Several soil samples showed EP Toxic for lead, chromium and barium.

During the drum removal, an on-site well was sampled. The 15 foot well serves the current operation and employees at Trenwyth Midwest Industries (purchased the northwest parcel with the welding and fabrication building). The results showed that the well was contaminated with tetrachloroethene (PCE) at a concentration of 1.8 ug/l (ppb). Later sampling of Trenwyth well and another on-site well at Hanson General Products (Mr. Hanson retained control of the smallest parcel with the fiberglass operation) confirmed the groundwater contamination of PCE at 1.4 and 1.3 ug/l

respectively.

A stand pipe located near the machine shop (now NATCo) was alleged to be used for disposal of wastes. The pipe went into a buried 55 gallon fiberglass drum. FIW sampled the drum contents and soil beneath the drum and found no volatiles. The pipe and drum were subsequently sealed with concrete.

The bankruptcy court contracted M. Rapps Associates, Incorporated to do a groundwater study of the site. M. Rapps had four monitor wells installed on the property in early 1987. The wells showed a very slight gradient of groundwater movement toward the west-southwest. Two of the wells contained levels of PCE contamination at 5.8 ug/l (ppb) in G101 and 4.8 ug/l in G104.

In 1990, NATCo contracted Warzyn to conduct a soil gas survey and collect soil and groundwater samples from their facility. What follows are three tables and a map from this report that show soil and groundwater contamination at the south end of the former General Hydraulics operation.

Table 2-1

Soil Gas Survey Results
North American Tool Corporation
South Beloit, Illinois

Soil Gas Sampling Location	Field Screening With HNu ppm(1)	Laboratory Analytical Results	
		Compound(2)	Concentration (ug/L of soil gas)
SG01	ND	ND	-
SG02	ND	ND	-
SG03	11-15 (11-15)	1,1-Dichloroethene	119 (118)
		cis-1,2-Dichloroethene	514 (499)
		Trichloroethene	17.3 (20.9)
		Tetrachloroethene	15.0 (17.8)
SG04	ND	cis-1,2-Dichloroethene	1.04
SG05	ND	ND	-
SG06	ND	ND	-
SG07	0.5	ND	-
SG08	ND	ND	-
SG09	3.0	Trichloroethene	<1.00
		Tetrachloroethene	36.4
SG10	1.0	1,1-Dichloroethene	3.61
		cis-1,2-Dichloroethene	84.5
		Trichloroethene	18.0
		Tetrachloroethene	27.2
SG11	1.0	ND	-
SG12	0.8	ND	-
SG13	0.5	ND	-
SG14	NA	ND	-

NOTES:

ND = No Detects
NA = Not Analyzed
<1.00 indicates concentration below method quantation limit of 1.00 ug/L soil gas.

(1) ppm total volatile organics above background (reported as benzene equivalent)

(2) Sample chromatograms for soil gas samples SG03, SG04, SG09 and SG10 also contain unidentified compounds.

(3) Concentrations in parenthesis are from SG03 duplicate sample.

Table 2-2

Groundwater Sampling Results Summary
North American Tool Corporation
South Beloit, Illinois

Location	Compound	Concentration (ug/L)	Groundwater(3) Quality Criteria (ug/L)
MW1	Tetrachloroethene	1.18	5
MW2	1,1-Dichloroethane	16.5	-
	1,1-Dichloroethene	2.15	7
	cis-1,2-Dichloroethene	4.91	70
	Tetrachloroethene	1.10	5
	1,1,1-Trichloroethane	66.3	200
	Trichloroethene	3.28	5
MW3	Tetrachloroethene	2.23 (1.78)	5
	1,1,1-Trichloroethane	1.25 (1.14)	200
Excavation Ground-water	1,1-Dichloroethene	1180	7
	1,1,1-Trichloroethane	9150	200

NOTES:

1. Sampling performed on August 30, 1990.

2. ( ) concentrations indicate results of duplicate sample (MW3 Dup) analysis.

3. Groundwater quality criteria from Title 35, Section 620.301, Illinois Administrative Code. (same as maximum concentration levels; U.S. EPA office of Drinking Water, April 1990 for those compounds)

4. - indicates standard not available for this coumpound

PFJ/vlr/APA/KJQ
[jlv-403-89]
15275-MD

Soil Sampling Results Summary
North American Tool Corporation
South Beloit, Illinois

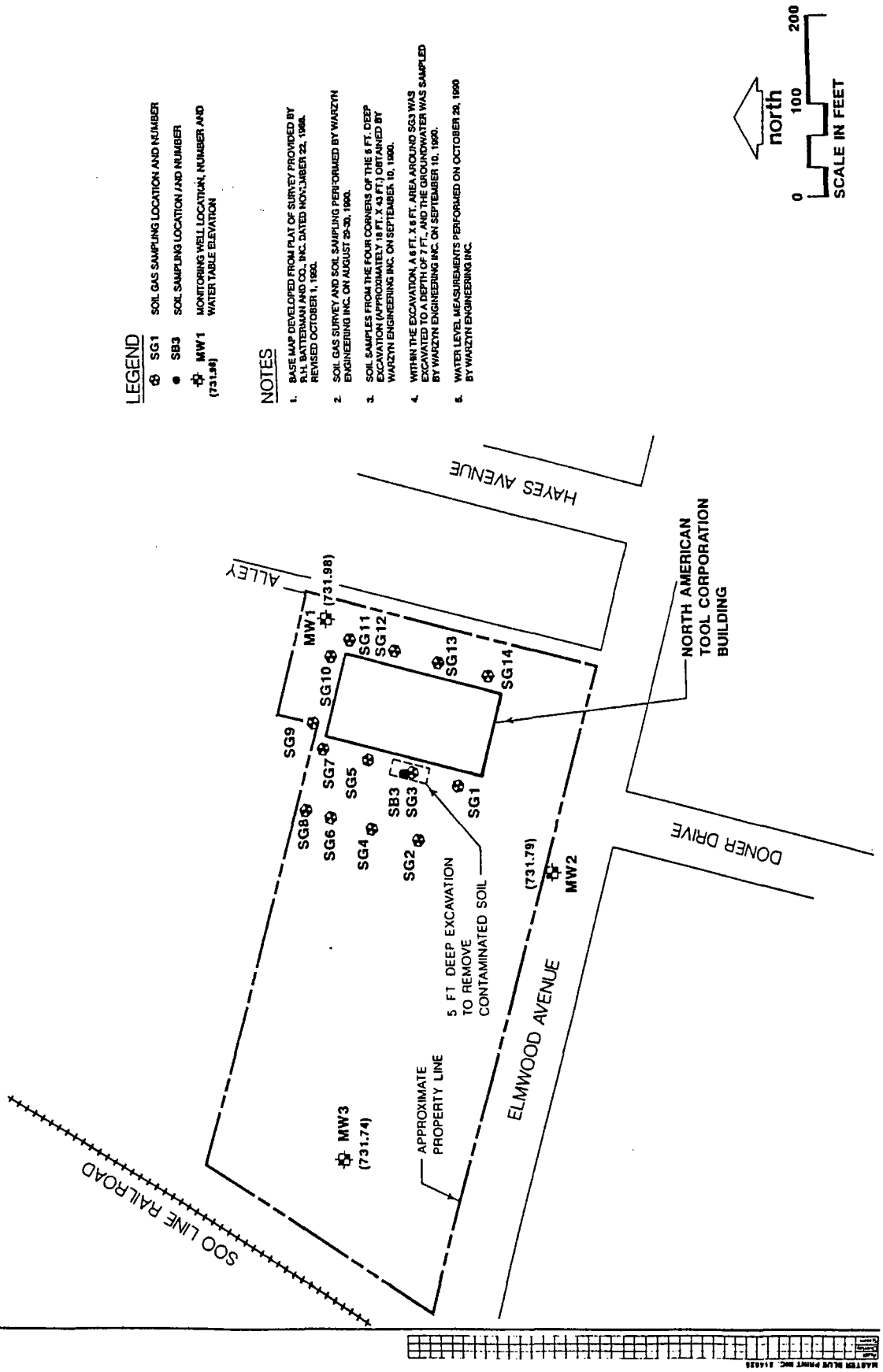
Sample Location(1)Q	Sample Depth (ft)	Compound	Concentration (ppm)
SB 03	1-1.5	Tetrachloroethene	<0.050
		1,1,1-Trichloroethane	0.422
		Trichloroethene	0.214
NE	____	1,1,1-Trichloroethane	0.129
		Trichloroethene	0.0526
		Xylenes	<0.050
NW	____	Toluene	<0.050
		1,1,1-Trichloroethane	0.135
		Trichloroethene	<0.050
SE	____	Toluene	<0.050
SW	____	Toluene	<0.050
		1,1,1-Trichloroethane	0.0673
		(2)	
Excavated Soil		1,2-Dichlorobenzene	1.450
		1,2-Dichloroethane	<0.050
		Ethyl Benzene	0.806
		Tetrachloroethene	1.240
		1,1,1-Trichloroethane	1.570
		Xylenes	14.600
		(2), (3)	

Table 2-3

<.050 = detected below quantitation limit of .050 mg/kg.
(1) Samples obtained from SB03, and from the NE, NW, SE and SW corners of the soil excavation (Refer to Drawing 15275-B1)
(2) Unidentified compounds also detected
(3) Sample also analyzed for total petroleum hydrocarbons (TPH). Sample contains unknown hydrocarbons. Estimated concentration of TPH is 2190 mg/kg, based on the gasoline standard.

PFJ/vlr/APA/KJQ
[jlv-403-88]
15275.00-MD

Figure 2-3


SITE FEATURES MAP
SITE INVESTIGATION
NORTH AMERICAN TOOL CORPORATION
SOUTH BELOIT, WINNEBAGO CO., ILLINOIS
WARZYN
1 OF 1
15275 B1
LEGEND
SG1 SOIL GAS SAMPLING LOCATION AND NUMBER
SB3 SOIL SAMPLING LOCATION AND NUMBER
MW1 (731.98) MONITORING WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
NOTES
1. BASE MAP DEVELOPED FROM PLAT OF SURVEY PROVIDED BY R.N. BATTERMAN AND CO., INC. DATED NOVEMBER 22, 1988. REVISED OCTOBER 1, 1990.
2. SOIL GAS SURVEY AND SOIL SAMPLING PERFORMED BY WARZYN ENGINEERING INC. ON AUGUST 29-30, 1990.
3. SOIL SAMPLES FROM THE FOUR CORNERS OF THE 5 FT. DEEP EXCAVATION (APPROXIMATELY 18 FT. X 43 FT.) OBTAINED BY WARZYN ENGINEERING INC. ON SEPTEMBER 10, 1990.
4. WITHIN THE EXCAVATION, A 6 FT. X 6 FT. AREA AROUND SG3 WAS EXCAVATED TO A DEPTH OF 7 FT., AND THE GROUNDWATER WAS SAMPLED BY WARZYN ENGINEERING INC. ON SEPTEMBER 10, 1990.
5. WATER LEVEL MEASUREMENTS PERFORMED ON OCTOBER 29, 1990 BY WARZYN ENGINEERING INC.
north
0 100 200
SCALE IN FEET
HAYES AVENUE
ALLEY
NORTH AMERICAN TOOL CORPORATION BUILDING
DOVER DRIVE
ELMWOOD AVENUE
SOO LINE RAILROAD
MW1 (731.98)
MW2 (731.79)
MW3 (731.74)
SG1
SG2
SG3
SG4
SG5
SG6
SG7
SG8
SG9
SG10
SG11
SG12
SG13
SG14
SB3
5 FT. DEEP EXCAVATION TO REMOVE CONTAMINATED SOIL
APPROXIMATE PROPERTY LINE

2.4 APPLICATION OF OTHER STATUTES

Two of the three facilities now in operation at the General Hydraulics site are regulated by other environmental statutes. The two facilities are small quantity generators as regulated by the Resource Conservation and Recovery Act (RCRA). Both Accra Plastics (ILD 102372315) and NATCo (ILD 151870409) store RCRA wastes. Accra Plastics also has an air pollution permit (ID # 201045ABB application # 88070083) as regulated under the Clean Air Act (CAA).

General Hydraulics was a non-notifier that declared bankruptcy in 1985 and subsequently was not regulated by RCRA.

3. SSI ACTIVITIES AND ANALYTICAL RESULTS

3.1 INTRODUCTION

This section outlines procedures utilized and observations made during the CERCLA SSI, conducted at General Hydraulics. Specific portions of this section contain information pertaining to the site representative interviews, reconnaissance inspection, field sampling procedures and key analytical findings. The SSI for General Hydraulics was conducted in accordance with the work plan, which was developed and submitted to USEPA Region V, prior to the initiation of field activities.

USEPA's Potential Hazardous Waste Site Inspection Report (Form 2070-13) for each of the Sites is located in Appendix C of this report.

3.2 SITE REPRESENTATIVE INTERVIEWS

Site representative interviews were conducted on October 22, 1991, between IEPA's Tim Murphy and the representatives for two of the three facilities now in operation on the parceled General Hydraulics site. The purpose of the meetings were to gain access agreements and gather additional information on the site.

Because company officials were at lunch at the time of arrival, this author proceeded in obtaining sample agreements with the private well owners on Hayes Avenue and arranging the off-site, background soil sample location. Two cooperative home-owners gave their consent along with the idea that they would inform the others on the block that IEPA

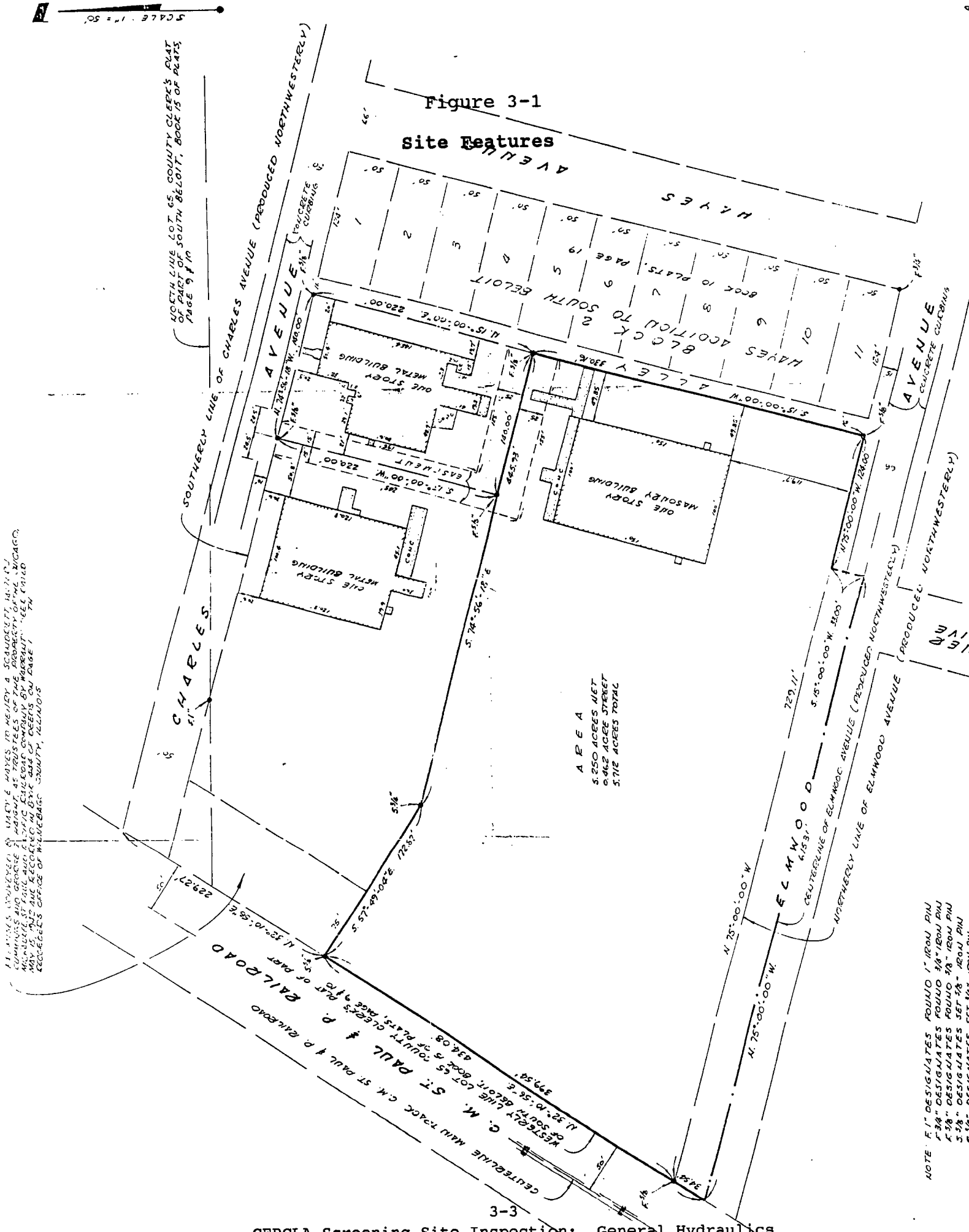
was planning to sample their wells in the coming weeks. At 12:40 pm, Sister David of St. Peters School was interviewed and granted permission to sample the school yard soil for background. Sister David said that 95 students are enrolled at the school, ranging from pre-school (3 years old) to eighth grade. She also said that the school was supplied with city water.

Cy Hotek and Dave Saunders of Trenwyth Midwest Industries (208 Charles Avenue) were interviewed at 1:12 pm. In 1986, the bankruptcy court sold Trenwyth the second largest of three parcels of land comprising the original General Hydraulics site. Trenwyth converted the General Hydraulics welding and fabrication shop for use in their acrylic glaze operation. Various types of building block and acrylic glaze are delivered to the operation. Trenwyth Midwest creates a marketable product after grinding the block face and glazing over it. The process involves 81 company employees. Drinking water is charcoal filtered from the 15 feet contaminated well at the facility. Mr. Saunders stated that their operation generates no hazardous waste.

Representing NATCo was president, Roger Taylor, Vice President, Curt Lansbury and their attorney, Burk Giessler. The meeting started with an explanation of portions of the CERCLA Pre-remedial process. NATCo manufactures tap and die tools. The company recently purchased equipment which will enable them to recycle some of their cutting fluids. As mentioned on page 2-11, NATCo maintains a less than 90 day

Figure 3-1

Site Features



storage pad for RCRA generated wastes.

The meeting proceeded with a tour of NATCo's new addition. The addition is built over the area where the stand pipe/buried drum was alleged to have been used for discarding General Hydraulics machine shop waste. At this time, the previously mentioned (page 2-6) 1990, Warzyn report was explained. Mr. Taylor informed this author that samples had been taken and contaminated soil removed prior to the building of the addition. Later (4:10 pm), Mr. Giessler presented a copy of Warzyn report to this author at his Rockford office.

This author stopped in at Accra Plastics two times throughout the day, but nobody was available for the interview. Instead, a short interview took place later, during the CERCLA SSI on November 5, 1991. Mr. John Wilborg and this author discussed the Pre-remedial process along with his concern over liability. Mr. Wilborg informed this author that Accra Plastics is a combined company with Hanson General Products, the company that was formed after the General Hydraulics bankruptcy. The smell of styrene from the operation was very strong, even throughout the Hayes Avenue neighborhood. Mr. Wilborg stated that the company is permitted for paint booths #1 and #2 (air permit issued September, 1988). The company supplies bottled water for its 10-15 employees.

3.3 RECONNAISSANCE INSPECTION

The site reconnaissance inspection for General

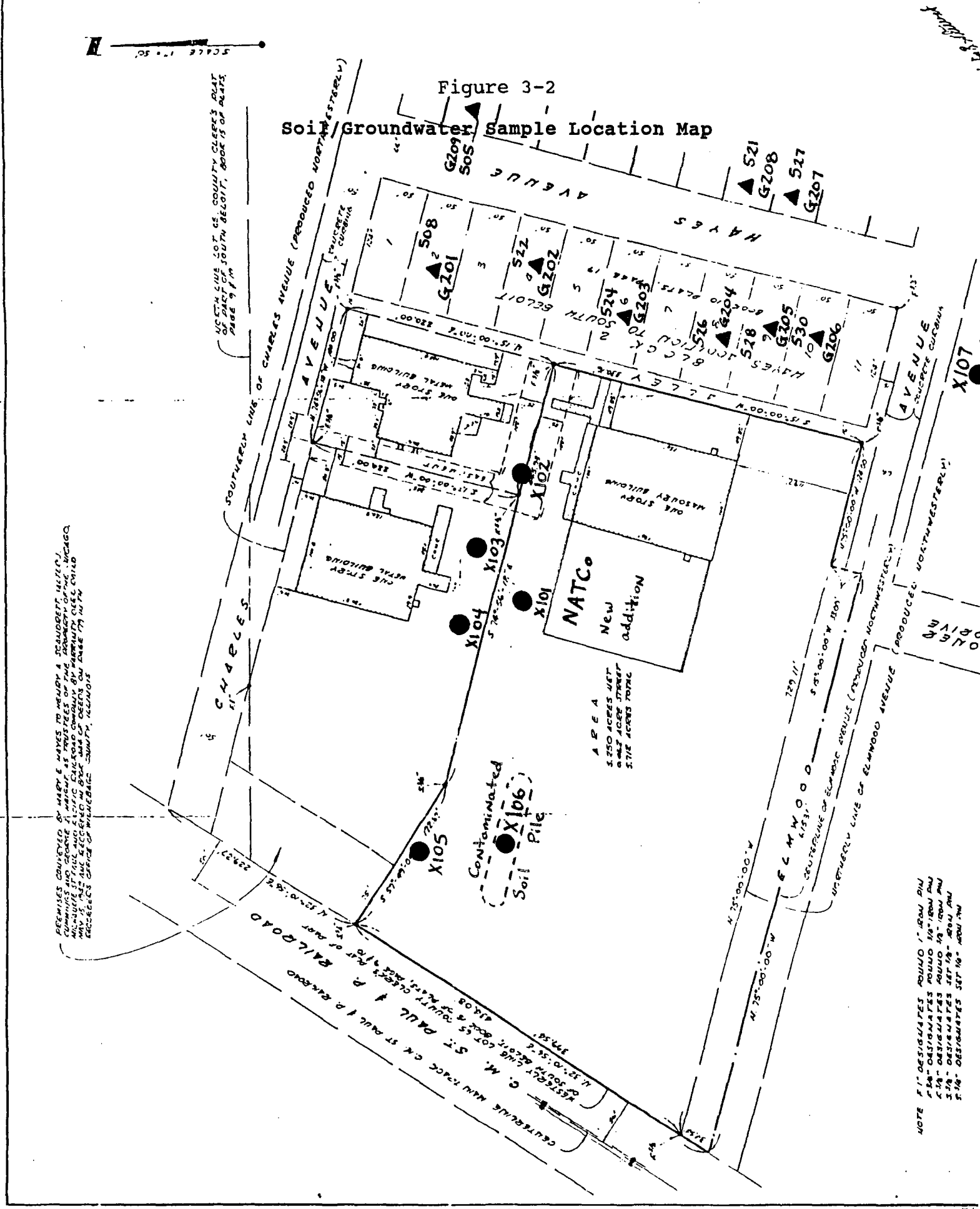
Hydraulics was conducted after the interviews on October 22, 1991 by this author. The site is bound on the north by Charles Avenue, across which contained undeveloped property owned by Cliff Tricke; on the west by the C. M. St. Paul and P. Railroad; on the south by Elmwood Avenue and undeveloped property; and on the east by the Hayes Addition residents (8 residential dwelling units along Hayes Avenue). Figure 3-1 on page 3-3 of this report, shows the prominent site features.

After seeing the new NATCo's new addition, this author and Mr. Lansbury checked the integrity and took water levels of the three monitor wells. The forth well was destroyed when a portion of Trenwyth Midwest Industries was paved over. The well protective covers were locked and two of the well's stainless steel casings were capped with cut-off, aluminum pop cans. Two of the monitor wells showed HNu photoionization detector (PID) levels slightly above background (1.5 units) while the third well in the southwest corner of the site, had a level 6.5 units above background. Later, this author used the HNu to screen for impending sample locations. Other than the contaminated soil pile, no distinct areas of contamination were observed. This author left the site at 3:24 pm.

During the reconnaissance visit, it was determined that Modified Level D inspection attire could be worn during the sampling activities. Level C (respirator) attire would also be brought along for use if air monitoring equipment detected

Figure 3-2

Soil/Groundwater Sample Location Map



significant concentrations over background or if other threatening conditions ensue.

3.4 SAMPLING PROCEDURES

Samples were collected by IEPA personnel to confirm the findings in the Warzyn report (attribution of groundwater contamination to site) and determine if the adjacent private wells are being effected by the site. In each of the soil samples and two of the groundwater samples, the USEPA Target Compound List (TCL) compounds were analyzed for. The seven remaining groundwater samples were analyzed for VOC's only (the contaminants of concern). The current list of compounds on the TCL is provided in Appendix D.

On November 5 and 6, 1991, IEPA collected the nine groundwater and seven soil samples. Figure 3-2 on page 3-6 of the report depicts the locations of the sixteen sample points.

3.5 SOIL SAMPLING PROCEDURES

Of the seven soil samples, six were collected on-site, within areas of suspected contamination. Only one off-site sample was collected for a background comparison. The background sample was collected at St. Peters School. Table 3-1, on the following page, describes each of the seven soil samples, listing their depth, physical appearance and location.

Table 3-1

Soil Sample Descriptions

Sample	Depth	Appearance	Location
X101	6"-1.5'	drk silty center of ditch	40.5' W of new dock @ NATCo in clay
X102	1'3"-2'6"	drk silty clay to s&g	40' N of the NE corner of truck loading dock @ NATCo & 45' SW of the SW corner of Accra Plastics bldg under asphalt
X103	11"-2'	blk silty clay	60' NW of NATCo dock behind Trenwyth under asphalt
X104	1'6"-2'4"	blk silty clay	37' N & 35' W of NATCo behind Trenwyth under asphalt
X105	1'-1.5'	s&g	90' W of the asphalt's end @ Trenwyth on the S side of ditch
X106	1'-3' angled	drk sandy silt	47' from the E end of contaminated soil pile at NATCo
X107 background	6"-1.5'	drk sandy silt	22' S of edge of Elmwood Ave & 39' E of sidewalk on W side of St. Peters School between 2 maple trees

drk-dark, blk-black, s&g-sand and gravel, '-feet, "-inches, @-at, E-east, N-north, W-west, S-south, Ave-Avenue

3.6 GROUNDWATER SAMPLING PROCEDURES

The private wells on Hayes Avenue were sampled to determine if site contaminants were migrating throughout this neighborhood's drinking water supply. Each home owner in the neighborhood stated either that their well was shallow, or that it was less than 20 feet deep. They also said that they did not treat the water. All nine wells were purged a minimum of 20 minutes. At the beginning, in the middle and at the end of each purge time, the groundwater temperature, specific conductivity and pH were monitored. Eight of the

samples were collected from inside faucets (airators removed) and one was taken from an outside spigot. The samples collected from at 508 and 528 Hayes Avenue (G201 and G204 respectively) were analyzed for the TCL. The remaining wells on either side of the avenue, were sampled for VOC's only. Table 3-2 highlights the groundwater sample locations.

Table 3-2

Groundwater Sample Descriptions

Sample	Owner	Well Depth	Block Location	Address
G201	W.Pearson	shallow*	W side, N	508 Hayes Ave
G202	K.Schmidt	shallow*	W side, N central	522 Hayes Ave
G203	unk. 5 families	unk.	W side, central	524 Hayes Ave
G204	Neives	shallow*	W side, central	526 Hayes Ave
G205	S.Klink-hammer	< 20'	W side, S central	528 Hayes Ave
G206	A.Perry	shallow*	W side, S	530 Hayes Ave
G207	J.Baden	< 20'	E side, S central across from G205	527 Hayes Ave
G208	Willie	< 20'	E side, central	521 Hayes Ave
G209	M.McMahon	shallow*	E side, N	505 Hayes Ave

*-owner states depth unknown but well is shallow, <-less than, unk.-unknown, E-east, N-north, W-west, S-south, Ave-avenue, '-feet

3.7 DECONTAMINATION PROCEDURES

Standard IEPA decontamination procedures were followed prior to the collection of all samples. All sampling equipment had previously been decontaminated at the IEPA warehouse prior to its transport to the site.

Decontamination procedures include the cleaning of all

equipment with trisodium phosphate solution, rinsing with hot tap water, acetone, hot tap water again, and finally rinsing with distilled water. All sampling equipment was dried and wrapped with aluminum foil prior to conducting any field sampling activities.

3.8 ANALYTICAL RESULTS FROM IEPA COLLECTED SAMPLES

Chemical analysis of groundwater samples collected from the private wells revealed the presence of the volatile contaminant tetrachloroethene (PCE) at the two homes on the north end of the block. Analysis of contaminated soil pile revealed the presence of volatiles, including PCE and 1,1,1-trichloroethane (1,1,1-TCA), polynuclear aromatic hydrocarbons (PNA's), pesticides, common laboratory artifacts, and common soil/sediment constituents. Appendix I in Volume 2 lists the analytical results from the CERCLA SSI.

3.9 KEY SAMPLE RESULTS

Table 3-4 summarizes the key analytical data generated during the CERCLA SSI.

Table 3-3

Key Analytical Data

Sample	Location	Compound Detected	Concentration
X107	Background from St. Peters school yard	- -	Below CRQL
X106	Contaminated Soil Pile	1,1,1-trichloroethane	3 ug/kg J
		tetrachloroethene	8 ug/kg
		PNA's	27.9 mg/kg
			+ 7.1 mg/kg J
X103	Soil between Trenwyth and NATCo	1,2-dichloroethene	3 ug/kg J
		toluene	3 ug/kg J
		xylene (total)	5 ug/kg J
G201	508 Hayes Ave well on W side, N end	tetrachloroethene	7 ug/l
G209	505 Hayes Ave well on E side, N end	tetrachloroethene	7 ug/l

J-estimated value

The following table summarizes the entire sample data data.

Sample Summary from IEPA Collected Samples

General Hydraulics
ILD 984767806

SAMPLING POINT	X101		X102		X103		X104		X105		X106		X107	
PARAMETER	11/05/91		11/05/91		11/05/91		11/05/91		11/05/91		11/05/91		11/05/91	
VOLATILES (ppb)														
Methylene Chloride	8	J	15		35		25		5	J	23		4	J
Acetone	--		28	J	220	J	49	J	16	J	7	J	--	
1,2-Dichloroethene(total)	--		--		3	J	--		--		--		--	
2-Butanone (MEK)	13	R	8	R	68	R	10	R	11	R	12	R	13	R
1,1,1-Trichloroethane	--		--		--		--		--		3	J	--	
Tetrachloroethene	--		--		--		--		--		8		--	
Toluene	--		--		3	J	--		--		--		--	
Xylene(total)	--		--		5	J	--		--		--		--	
TIC's			(2)		(1)		(1)				(1)			
SEMIVOLATILES (ppb)	--		--		--		--							
Acenaphthene	--		--		--		--		--		330	J	--	
Dibenzofuran	--		--		--		--		--		170	J	--	
Fluorene	--		--		--		--		--		370	J	--	
Phenanthrene	--		--		--		--		--		3900		--	
Anthracene	--		--		--		--		--		1000		--	
Fluoranthene	--		--		--		--		--		6600		--	
Pyrene	--		--		--		--		--		6300	J	--	
Chrysene	--		--		--		--		--		3800		--	
Benzo(b)fluoranthene	--		--		--		--		--		2900		--	
Benzo(k)fluoranthene	--		--		--		--		--		2700		--	
Benzo(a)pyrene	--		--		--		--		--		3100		--	
Indeno(1,2,3-cd)pyrene	--		--		--		--		--		1900		--	
Benzo(g,h,i)perylene	--		--		--		--		--		2000		--	
TIC's	(7)		(6)		(5)		(9)		(5)		(19)		(7)	
PESTICIDES/PCB'S (ppb)														
4,4'-DDD	--		--		--		--		--		360		--	
4,4'-DDT	--		--		--		--		--		480		59	
Aroclor-1254	--		--		--		--		--		35	J	--	

General Hydraulics
ILD 984767806

SAMPLING POINT	X101	X102	X103	X104	X105	X106	X107
	11/05/91	11/05/91	11/05/91	11/05/91	11/05/91	11/05/91	11/05/91
PARAMETER							
INORGANICS (water-ppb, soil/sed-ppm							
Aluminum	13100	8580	13500	17500	2690	9000	9960
Antimony	15 R	13 R	14 R	14 R	13 R	13 R	13 R
Arsenic	3.8	2.6	5.0	2.4	2.6	3.1	4.0
Barium	138	69	145	182	39 B	100	143
Beryllium	0.8 B	0.5 B	0.8 B	1.0 B	0.3	0.6 B	--
Cadmium	--	--	--	--	0.4	--	--
Calcium	33900	13300	11600	10000	53300	12000	4100
Chromium	39	16	23	28	12	27	18
Cobalt	8.1 B	4.9 B	6.5 B	11 B	2.1	4.4 B	5.7
Copper	46 J	6.9 J	13 J	16 J	6.5 J	78 J	12 J
Iron	20400	12600	19100	22700	11000	13400	12300
Lead	30.3	6.6	14.2	13.7	5.3	42	27.8
Magnesium	18500	7900	6200	5200	32400	4200	2300
Manganese	810	416	730	1000	397	325	810
Mercury	0.05B	--	--	--	--	--	--
Nickel	35	9.1 B	17	20	12	33	13
Potassium	1560	655 B	1030 B	1100 B	420 B	580 B	1400
Selenium	0.3 J	0.3 J	0.3 J	0.3 J	0.3 J	0.3 BJ	0.3 J
Silver	--	--	--	--	--	--	--
Sodium	--	--	--	--	--	--	--
Thallium	0.5 BJ	0.1 J	0.3 BJ	0.2 BJ	0.1 J	0.4 BJ	0.7 BJ
Vanadium	26	18	28	34	22	21	24
Zinc	170	39	66	86	19	115	64
Cyanide	--	--	--	--	--	--	--
Sulfate		--	--	--	--		
Sulfide		--	--	--	--		

General Hydraulics
ILD 984767806

SAMPLING POINT	G201	G202	G203	G204	G205	G206	G207	G208	G209
PARAMETER	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91
VOLATILES (ppb)									
Methylene Chloride	--	--	--	--	--	--	--	--	--
Acetone	17 J	--	--	--	--	--	--	--	--
1,2-Dichloroethene(total)	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	10 R	10 R	10 R	10 R	10 R	10 R	10 R	10 R	10 R
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--
Tetrachloroethene	7	--	--	--	--	--	--	--	7
Toluene	--	--	--	--	--	--	--	--	--
Xylene(total)	--	--	--	--	--	--	--	--	--
TIC's									
SEMIVOLATILES (ppb)									
Acenaphthene	--				--				
Dibenzofuran	--				--				
Fluorene	--				--				
Phenanthrene	--				--				
Anthracene	--				--				
Fluoranthene	--				--				
Pyrene	--				--				
Chrysene	--				--				
Benzo(b)fluoranthene	--				--				
Benzo(k)fluoranthene	--				--				
Benzo(a)pyrene	--				--				
Indeno(1,2,3-cd)pyrene	--				--				
Benzo(g,h,i)perylene	--				--				
TIC's									
PESTICIDES/PCB'S (ppb)									
4,4'-DDD	--				--				
4,4'-DDT	--				--				
Aroclor-1254	--				--				

General Hydraulics
ILD 984767806

SAMPLING POINT	G201	G202	G203	G204	G205	G206	G207	G208	G209
PARAMETER	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91	11/06/91
INORGANICS (water-ppb, soil/sed-ppm)									
Aluminum	--				--				
Antimony	--				--				
Arsenic	0.6 J				1.0 B				
Barium	69.6 B				64.4 B				
Beryllium	--				--				
Cadmium	--				--				
Calcium	91900				88300				
Chromium	--				9.6 B				
Cobalt	--				--				
Copper	--				9.4				
Iron	--				--				
Lead	1.7 BJ				0.7 J				
Magnesium	36900				37100				
Manganese	--				--				
Mercury	0.17				0.12				
Nickel	11 J				11 J				
Potassium	3840 B				4640 B				
Selenium	1.6 BJ				1.6 BJ				
Silver	--				--				
Sodium	29600				27000				
Thallium	--				--				
Vanadium	--				--				
Zinc	28.5				45.3				
Cyanide	--				--				
Sulfate	45000				43000				
Sulfide	--				--				
FIELD TESTS									
Temperature (degrees F)	59.5	57.3	53.6	60.2	55.3	57	53.4	57	52
Sp. Conductivity (umhos)	1330	1180	1080	1280	1220	1180	1180	1240	1300
Ph	7.71	7.75	7.78	7.66	7.55	7.66	8.21	7.69	7.9

U.S.E.P.A. DEFINED DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
• U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
• J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
• C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
• B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
• D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values are flagged with the "D" flag.	not used

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
• E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference
• A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
• M	not used	Duplicate injection (a QC parameter) not met.
• N	not used	Spiked sample (a QC parameter) recovery not within control limits.
• S	not used	The reported value was determined by the Method of Standard Additions (MSA).
• W	not used	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
• *	not used	Duplicate analysis (a QC parameter) not within control limits.
• +	not used	Correlation coefficient for MSA (a QC parameter) is less than 0.995.

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
• P	not used	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
• CV	not used	Method qualifier indicates analysis by Cold Vapor AA.
• AV	not used	Method qualifier indicates analysis by Automated Cold Vapor AA
• AS	not used	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
• T	not used	Method qualifier indicates Titrimetric analysis.
• NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
• R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

4. IDENTIFICATION OF SOURCES

This section discusses the sources of contamination identified at the General Hydraulics site.

Information concerning the size, volume and waste composition of each source has been derived throughout the initial site assessment and the screening site inspection sampling action. It should be pointed out however, that the total number and nature of each of the sources identified below may be subject to change, as the site progresses though the CERCLA site investigation program and receives further investigation

4.1 CONTAMINATED SOIL PILE

Contaminated soil was excavated from the west side of the existing NATCo building (General Hydraulics machine shop) on September 10, 1990 by Selvog Excavation Inc., with oversight and monitoring by Warzyn. The excavation was centered around soil gas location SG03 (see map on page 2-10). The dimensions of the excavation were approximately 43 feet by 18 feet by 5 feet deep (3870 cubic feet). The pile was created when backhoe buckets were screened with a HNu PID (11.7 eV). Those buckets with readings above background, were stockpiled on plastic, east of the building. A composite sample from the pile found aromatics and chlorinated solvents, which have been tabled on page 2-9.

During the CERCLA SSI the pile was found to be 190 feet west of the new addition with dimensions measuring 95 feet by 16 feet by 5 feet high triangulated (length times one-half

base times height = 3800 cubic feet). The pile is on top of plastic but is not covered. The analysis of the CERCLA SSI sample collected from the center of the pile shows PNA's along with the chlorinated solvents 1,1,1-trichloroethane and tetrachloroethene

4.2 CONTAMINATION SOIL UNDER NEW ADDITION

HNu reading were also used to determine the lateral extent of the excavation. As it reads in the report, the soils exhibited reading of 40-50 ppm near the soil gas location SG03, with slight or no readings above background at the excavation boundaries. On the floor of the excavation at the five feet depth, HNu reading up to 100-160 ppm were observed. Warzyn's samples from the four corners of the excavation, contained 1,1,1-trichloroethane in three of the four samples. A groundwater sample collected from the water infiltrating the pit contained higher levels of contaminants than the nearby monitor wells.

4.3 ABANDONED DRUM AREA

The place where FIW removed the 112-120 abandoned drums appears to have been somewhere between or slightly west of NATCo and Trenwyth Industries in an area that has been covered with asphalt. Little is known as to the exact location or size of this possible source of contamination. During the CERCLA SSI, samples X103 and X104 were collected with this source in mind. Trace amounts of 1,2-dichloroethene, xylene and toluene were estimated in X103.

5. MIGRATION PATHWAYS

5.1 INTRODUCTION

This section includes information that may be useful in determining General Hydraulics impact on the four exposure pathways identified in CERCLA's hazard ranking system (HRS). The three migration pathways - groundwater, surface water and air, and the soil exposure pathway will be discussed in this section. Based on the analytical results noted in the previous section, and the finding from previous investigations, only the groundwater pathway appears to be subject to a release from the site. It is yet to be determined whether Warzyn's analytical data will be HRS useable, in any case, the General hydraulics site does have the potential to effect human health.

5.2 GROUNDWATER PATHWAY

The alluvial deposits in the South Beloit area range from less than 30 feet on the west side of the Rock River to more than 225 feet on the east side of the river. The varying depths of the unconsolidated clay, silt, sand, gravel and boulder deposits is due to the buried channel of the Rock Valley and associated bedrock valleys (ISGS, 1960). The unconsolidated deposits are underlain by the Galena-Platteville dolomite, St.Peter sandstone, Trempealeau dolomite, Franconia Formation (interbedded shale, sandstone and dolomite), Ironton-Galesville sandstone, Eau Claire Formation (green to red shale, with interbedded dolomite and sandstone) and the Mt. Simon sandstone (ISGS, 1960).

Private wells obtain water primarily from the shallow sand and gravel deposits or the dolomite aquifer in areas where the unconsolidated deposits are thin. Public water supply systems (Table 5-1 lists the Public Water Supply wells within four miles of the site) in the area use a combination of sand and gravel wells with bedrock wells. The closest private wells are along Hayes Avenue. The closest public water supply well is 2000 feet east of the site and is part of the South Beloit-Beloit, Wisconsin public water supply system (owned by the Wisconsin Power and Light Company 500 Townline, Beloit, Wisconsin 53511). Table 5-2 lists distance rings, number of private wells, number of public wells and the total population for all people using groundwater.

Table 5-1

Public Wells within Four Miles

Distance	Well Owner	Well	Feet	Aquifer
0.20 mi E	WI Power & Light Co.	#3	1190	Sandstone
0.68 mi NE	WI Power & Light Co.	#10	113	Sand & Gravel
1.33 mi NE	WI Power & Light Co.	#8	140	Sand & Gravel
1.40 mi N	WI Power & Light Co.	#5	1200	Sandstone
2.46 mi SSE	Goldie Floberg	#1	85	Sand & Gravel
2.46 mi SSE	Goldie Floberg	#2	95	Sand & Gravel
2.46 mi SSW	City of Rockton	#5	120	Sand & Gravel
3.03 mi NE	WI Power & Light Co.	#9	1130	Sandstone
3.26 mi ENE	WI Power & Light Co.	#12	107	Sand & Gravel
3.71 mi SSW	City of Rockton	#6	725	Sandstone
3.75 mi NNE	WI Power & Light Co.	#11	149	Sand & Gravel

Table 5-2

Total Population on Private and Public Wells

Distance	Private Wells	Public Wells	Total Population
0-1/4	20	1	4153
1/4-1/2	8	0	21
1/2-1	34	1	7271
1-2	251	2	11933
2-3	297	3	2035
3-4	391	4	19134

*Total population is the total served by public and private well systems. The private wells were multiplied by 2.61 people per household for Winnebago County (Illinois) and 2.68 for Rock County (Wisconsin).

5.3 SURFACE WATER PATHWAY

Rain water from the site's relatively flat surface, drains east, emptying into the Rock River. The Rock River is used for recreation (swimming, boating, skiing, canoeing) and fishing for such species as largemouth bass, smallmouth bass, bluegill, crappie, sunfish, northern pike, channel catfish, carp, walleye and bullheads. According to the U.S. Geological Survey Water Data Report (Volume 1, page 148), the Rock River has a drainage area of 6,363 square miles and an average discharge or flow rate of 4,073 cubic feet per second. (All measurements were collected at the Rockton, Illinois gaging station [ID # 05437500] approximately 5 miles downstream from the site). The site is located within the 100 year flood zone and may be within the 10 year flood zone (Federal Emergency Management Agency Flood

Insurance Map for South Beloit, Illinois). Wetland areas occur along a major portion of the surface water route throughout the fifteen miles downstream. According to the Illinois Department of Conservation, (with the exception of wetlands) there are no sensitive environments located within a one mile radius of the site. Also, there are no known sensitive aquatic species which occur along the fifteen mile downstream surface water route.

5.4 AIR PATHWAY

The smell of styrene (from Accra Plastics) was obnoxious while sampling the private wells during the second day of CERCLA SSI. Some of the Hayes Avenue residents have complained about the smell to local authorities.

Wind blown across the uncovered contaminated soil pile could spread the contamination. The rest of the site is either vegetated or under some type of cover material.

It has been estimated that about 11,500 people live within a mile of the site and about 45,000 people live within 4-miles, based on 1990 U.S. Census figures. Table 5-3 shows the 4-mile radius population calculation.

Table 5-3

Target Population Calculation

City	Population Density/ Total Population	Area w/in 4-Mile Radius	Population w/in 4-Mile Radius
S. Beloit	4,088	100 %	4,088
Beloit, WI	35,729	100 %	35,729
Rockton	2,313	100 %	2,313
rural	2.64/house	1000 homes	2,640
		Total Target Population =	44,770

5.5 SOIL EXPOSURE PATHWAY

The off-site soil sample collected at St. Peters school yard indicates that the contamination has not migrated to this point. For the most part, General Hydraulics is covered with vegetation and asphalt, so it is unlikely that wind blown soils have migrated to the nearby residential area. Only the uncovered, contaminated soil pile on-site, poses a threat of soil exposure. The site is not fenced and there may be an attractiveness for kids to play on the soil pile.

6. BIBLIOGRAPHY

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APPENDIX A

GROUNDWATER 4-MILE RADIUS MAP

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	SITE: General Hydraulics SITE ILD 984767806

USGS TOPOGRAPHIC MAPS

NAME: Beloit, Wis. NUMBER: unk. DATE: 1976	NAME: Shopiere, Wis. NUMBER: unk. DATE: 1976	Site Location Nearest Private Well Municipal Bdy. Public Wells
NAME: South Beoit, Ill.-Wis. NUMBER: 12A DATE: 1976	NAME: Belvidere, Ill-Wis. NUMBER: 11B DATE: 1975	ILLINOIS QUADRANGLE LOCATION

SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET

N W E S

APPENDIX B

SURFACE WATER ROUTE MAP

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA

REORDER BY NUMBER 075AR

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA

REORDER BY NUMBER 075AR

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA

REORDER BY NUMBER 075AR

DRAWING NUMBER 12-A

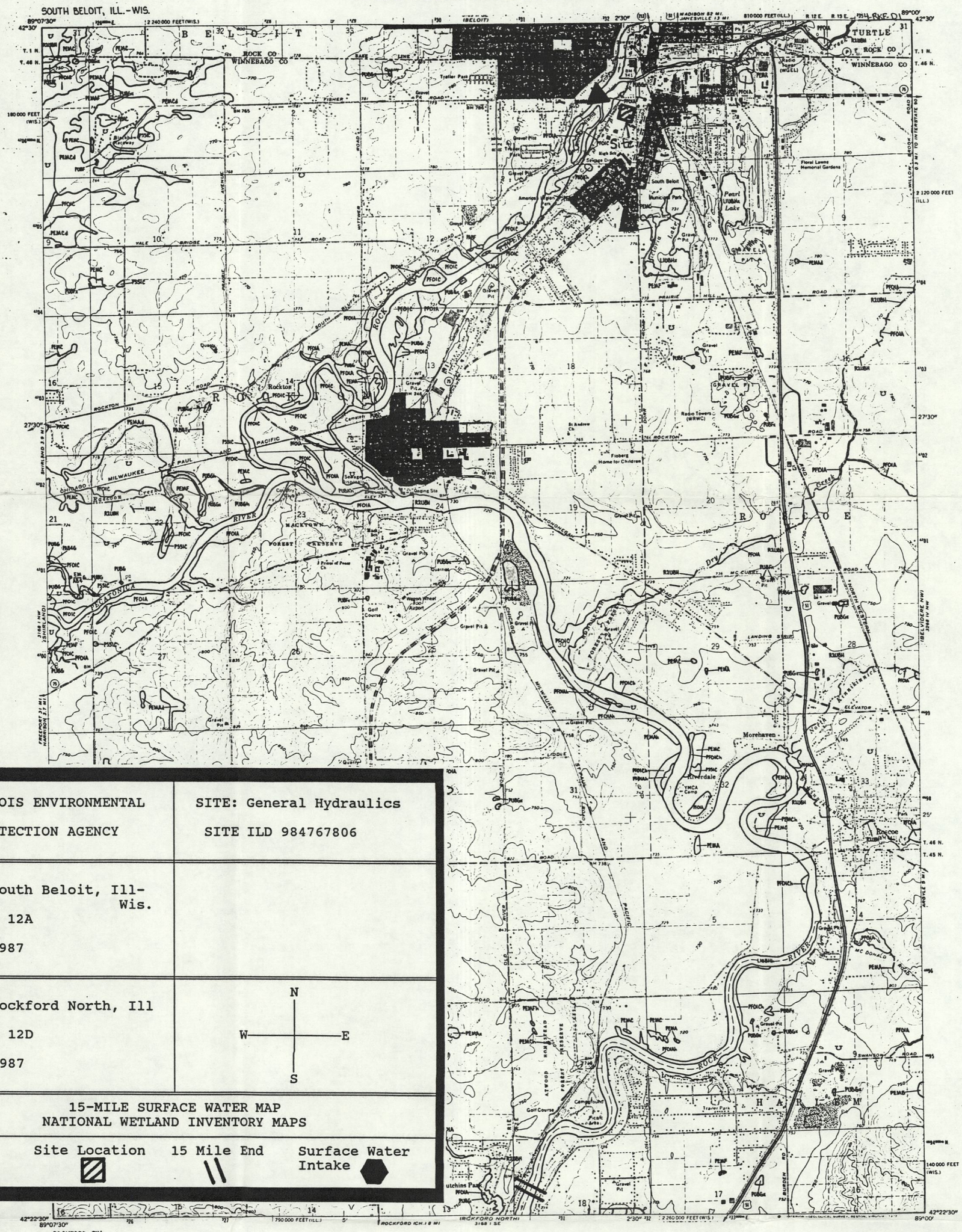
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA

REORDER BY NUMBER 075AR

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

SOUTH BELOIT, ILL.-WIS.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	SITE: General Hydraulics SITE ILD 984767806
QUAD: South Beloit, Ill-Wis. NUMBER: 12A DATE: 1987	
QUAD: Rockford North, Ill NUMBER: 12D DATE: 1987	N W E S

15-MILE SURFACE WATER MAP
NATIONAL WETLAND INVENTORY MAPS

PPE ▶ Site Location ▨ 15 Mile End // Surface Water Intake ⬢

SOUTH BELOIT, ILL.-WIS. 12-A

SCALE 1:24 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 5 0 1 KILOMETER

□ 1 acre ▢ 10 acres ▢ 20 acres

ACREAGE GUIDE

Other information including a narrative report concerning the wetland resources depicted on this document may be available. For information, contact:

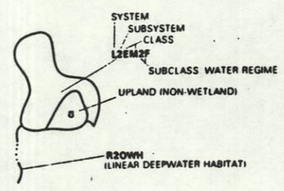
Regional Director (ARDE) Region III
U.S. Fish and Wildlife Service
Federal Bldg., Ft. Snelling (AD/BSP
Twin Cities, Minnesota 55111

SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with Classification of Wetlands and Deepwater Habitats of the United States (FWS/OBS - 78/31 December 1979). The aerial photographs typically reflect conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of the aerial photographs. Thus, a detailed on the ground and historical analysis of a single site may result in a revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and ti use obscured by dense forest cover may not be includec on this document.

Federal, State and local regulatory agencies with jurisc iction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE



U – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.

NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such information to the address indicated.
- Subsystems, Classes, Subclasses, and Water Regimes in *italics* were developed specifically for NATIONAL WETLANDS INVENTORY mapping.
- Some areas designated as R4SB, R4SBW, OR R4SBJ (INTERMITTENT STREAMS) may not meet the definition of wetland.
- This map uses the class Unconsolidated Shore (US). On earlier NWI maps that class was designated Beach/Bar (BB), or Flat (FL). Subclasses remain the same in both versions.

AERIAL PHOTOGRAPHY

DATE: 11/80	DATE: / /
SCALE: 1:58 000	SCALE:
TYPE: CIR	TYPE

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Prepared by National Wetlands Inventory
1987

Illinois Department of Conservation
life and land together

SYSTEM: M — MARINE

SUBSYSTEM	1 — SUBTIDAL					2 — INTERTIDAL				
CLASS	RS — ROCK BOTTOM	US — UNCONSOLIDATED BOTTOM	AB — AQUATIC BED	RF — REEF	OW — OPEN WATER/ Unknown Bottom	AB — AQUATIC BED	RF — REEF	RS — ROCKY SHORE	US — UNCONSOLIDATED SHORE	
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Rooted Vascular 5 Unknown Submergent	3 Coral 3 Worm		1 Algal 2 Rooted Vascular 5 Unknown Submergent	3 Coral 3 Worm	2 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	

SYSTEM: E — ESTUARINE

SUBSYSTEM	1 — SUBTIDAL					2 — INTERTIDAL							
CLASS	RS – ROCK BOTTOM	US – UNCONSOLIDATED BOTTOM	AB – AQUATIC BED	RF – REEF	OW – OPEN WATER/ Unknown Bottom	AB – AQUATIC BED	RF – REEF	SS – STREAMBED	RS – ROCKY SHORE	US – UNCONSOLIDATED SHORE	EM – EMERGENT	SS – SCRUB SHRUB	FO – FORESTED
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm		1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	2 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen

SYSTEM: R — RIVERINE

SUBSYSTEM	1 — TIDAL	2 — LOWER PERENNIAL		3 — UPPER PERENNIAL		4 — INTERMITTENT	5 — UNKNOWN PERENNIAL	
CLASS	RS — ROCK BOTTOM	US — UNCONSOLIDATED BOTTOM	*SS — STREAMBED	AB — AQUATIC BED	RS — ROCKY SHORE	US — UNCONSOLIDATED SHORE	**EM — EMERGENT	OW — OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble 3 Cobble-Gravel 4 Sand 5 Mud 6 Organic 7 Vegetated	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

*STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM
**EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS. The remaining CLASSES are found in all SUBSYSTEMS

SYSTEM: L — LACUSTRINE

SUBSYSTEM	1 — LIMNETIC				2 — LITTORAL				
CLASS	RS — ROCK BOTTOM	US — UNCONSOLIDATED BOTTOM	AB — AQUATIC BED	OW — OPEN WATER/ Unknown Bottom	RS — ROCKY SHORE	US — UNCONSOLIDATED SHORE	EM — EMERGENT	OW — OPEN WATER/ Unknown Bottom	
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface		1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent		

SYSTEM: P — PALUSTRINE

CLASS	RS — ROCK BOTTOM	US — UNCONSOLIDATED BOTTOM	AB — AQUATIC BED	US — UNCONSOLIDATED SHORE	UL — MOSS-LICHEN	EM — EMERGENT	SS — SCRUB-SHRUB	FO — FORESTED	OW — OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	

MODIFIERS

In order to more adequately describe wetland and deepwater habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME		WATER CHEMISTRY		SOIL	SPECIAL MODIFIERS
Non-Tidal	Tidal	Coastal Halinity	Inland Salinity		
A Temporarily Flooded B Saturated C Seasonally Flooded D Seasonally Flooded-well Drained E Seasonally Flooded-Saturated F Semipermanently Flooded G Intermittently Exposed	H Permanently Flooded J Intermittently Flooded K Artificially Flooded W Intermittently Flooded-Temporary Y Saturated-Semipermanent-Seasonal Z Intermittently Exposed-Permanent U Unknown	1 Hyperhaline 2 Euhaline 3 Mixohaline (Brackish) 4 Polyhaline 5 Mesohaline 6 Oligohaline 0 Fresh	7 Hypersaline 8 Eusaline 9 Mesosaline 0 Fresh	g Organic n Mineral	b Beaver d Partially Drained/ Ditched f Farmed h Diked/ Impounded r Artificial Substrate s Spoil x Excavated

E Artificially Flooded
L Subtidal
M Irregularly Exposed
N Regularly Flooded
P Irregularly Flooded

T Temporary Tidal
S Seasonal Tidal
T Semipermanent Tidal
V Permanent Tidal
U Unknown

*These water regimes are only used in tidally influenced freshwater systems

SDMS US EPA Region V

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APPENDIX C

USEPA FORM 2070-13

L201045 0022/Winnebago Co.
General Hydraulics
ILD 984767806

Site Inspection Report

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
General Hydraulics	301 Charles Ave				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
South Beloit	IL	61080	Winnebago	201	16

09 COORDINATES LATITUDE 42 29 00.0 LONGITUDE 089 02 30.0

10 TYPE OF OWNERSHIP (Check one)
■ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
11 5 6 91 (MONTH DAY YEAR)	■ ACTIVE ☐ INACTIVE	early 1950's (BEGINNING YEAR) 1983* (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
■ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Tim Murphy	EPS	IEPA	(217) 782-6760
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Al Kirwan	EPS	IEPA	(309) 693-5463
Greg Spencer	EPS	IEPA	(217) 782-6760
Bruce Ford	EPE	IEPA	(217) 782-6760
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Roger Taylor - NATCo	Pres.	S. Beloit, IL 61080 215 Elmwood Ave.	(815) 389-2300
Curt Lansbury - NATCo	V.P.	"	( ) "
Burk Giessler - NATCo	attorney		( )
Dave Sauders - Trenwyth Ind.		S. Beloit, IL 61080 208 Charles Ave.	(815) 389-3003
Cy Hotek - Trenwyth Ind.		"	( ) "
John Wihlborg - Accra Plactics		S. Beloit, IL 61080 238 Charles Ave.	(815) 389-5100

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	12:30pm	cold 29° F overcast w/ light snow

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
		( )

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Tim Murphy	IEPA	BLP/DRM/RPM	(217) 524-1657	6 2 92 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

* New facilities have moved into the parcelled property

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767 806

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ■ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TONS _____
CUBIC YARDS 171
NO. OF DRUMS 125 (removed)

03 WASTE CHARACTERISTICS *(Check all that apply)*

- ■ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ■ D. PERSISTENT
- ☑ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	UNK		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	UNK		
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	UNK		

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	Tetrachloroethylene (PCE)	127184			
SOL	1,1,1-Trichloroethane	71556			
SOL	Trichloroethene	79016			
SOL	1,1-Dichloroethane	75343			
SOL	1,1-Dichloroethene	75354			
SOL	cis-1,2-Dichloroethene				
SOL	1,2-Dichlorobenzene	95501			
SOL	ethyl Benzene	100414			
SOL	Xylenes	1330027			

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

IEPA BLPC file L2010450 22
Nov. 1990 Warzyn Report 15275 Site Investigation North American Tool Corporation South Beloit, Illinois (90SI NATCo)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
ILD	984767806

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 ■ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >44,000 — 04 NARRATIVE DESCRIPTION

Two of four GW monitor wells have shown concentrations of PCE at 5.8 ug/l (ppb) in G101 and 4.8 ug/l (ppb) in G104

01 ■ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Site is 450' E of Rock River however, the drainage pathway for the site was Sampled and it does not appear the river has been impacted via overland route

01 ■ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Uncovered pile of contaminated soil may release very low levels of volatiles Soil gas reading were obtained (of the compounds found in Part 2 IV) in Aug. 90

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None documented or observed

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4088 — 04 NARRATIVE DESCRIPTION

No contamination was found off-site however the on-site contominated soil pile is uncovered and site access is not controlled

01 ■ F. CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE: 5-16-86 *) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 8 (Acres) — 04 NARRATIVE DESCRIPTION *EP tox metals in soil

Samples collected by NATCo contractor 9-10-90 showed contaminants listed on previous page Part 2 IV in Sept. 1990

01 ■ G. DRINKING WATER CONTAMINATION — 02 ■ OBSERVED (DATE: 6-23-86) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >44,000 — 04 NARRATIVE DESCRIPTION

Two of nine homes sampled on either side of Hayes Ave (adjacent the site) were found to have PCE at 7 ug/l (ppb) during SSI

01 ■ H. WORKER EXPOSURE/INJURY — 02 ■ OBSERVED (DATE: 6-23-86) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 60 — 04 NARRATIVE DESCRIPTION

50 workers (on-site) at Trenwyth Ind. were drinking contaminated well water 1.8 ug/l (ppb) PCE prior to the addition of a charcoal filtering system.
1.3 ug/l (ppb) PCE found at Hanson General Products (Accra Plastics) (on-site) 12-21-87 w/ 10-15 employees

01 ■ I. POPULATION EXPOSURE/INJURY — 02 ■ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 744,000 — 04 NARRATIVE DESCRIPTION

See E. G. + H. above

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None documented or observed

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

None documented or observed

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None documented or observed

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Pile of contaminated soil need to be disposed of

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None documented or observed

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None documented or observed

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None documented or observed

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 744,000

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)

IEPA BLPC file L2010450ZZ
90 SI NATCo
Site Reconnaissance 10/22/91

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
■ C. AIR	201045ABB 88070083	Sept '88	unk	at Accra Plastics (Styrene)
■ D. RCRA	ILD 151870409	April '89	unk	NATCo (Small quantity)
■ E. RCRA ~~INTERIM STATUS~~	ILD 102372315	Sept '88	unk	Accra Plastics (Small quantity)
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
■ B. PILES	3,870	ft3
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ■ A. BUILDINGS ON SITE

06 AREA OF SITE

8 (Acres)

07 COMMENTS

The pile comes from under the new addition to NATC (excavation size 43'x18'x5' = 3870 ft³) As the soils were removed, the soil in each backhoe was screened with an HNu PID (11.7eV). Soils with readings above background were segregated and piled on-site.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ■ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Contaminated soil stockpiled on plastic

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ■ YES ☐ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Site Reconnaissance 10/22/91

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ■	A. ■	B. ☐	C. ☐	A. .2 (mi)
NON-COMMUNITY	C. ☐	D. ■	D. ☐	E. ■	F. ☐	B. .009 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

■ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER	03 DISTANCE TO NEAREST DRINKING WATER WELL
>44,000	.009 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
6-7 (ft)	UNK possibly W-SW	6 (ft)	UNK (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

On-site wells are 15 feet deep, Nearby, residential wells are less than 20 feet deep, The public well in bedrock (open from 230.5 - 1185 feet).

10 RECHARGE AREA	COMMENTS	11 DISCHARGE AREA	COMMENTS
■ YES ☐ NO	fill/alluvial deposits	■ YES ☐ NO	Rock River

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

■ A. RESERVOIR, RECREATION ~~DRINKING WATER SOURCE~~ ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Rock River	☐	.085 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	02 DISTANCE TO NEAREST POPULATION
A. 11,500 NO. OF PERSONS	B. 25,000 NO. OF PERSONS	C. 40,000 NO. OF PERSONS	.009 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
10,000	.009 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

South Beloit 4088, Beloit has 40,000 - two cities near site with average densities, the surrounding rural areas are fairly populated.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ■ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ■ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
73 (ft)	>5 (ft)	UNK	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
35 (in)	2.5 (in)	0 %	W	<2 %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE OTHER

A. _____ (mi) B. .056 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

NA (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. 0 (mi)	B. 0 (mi)	C. _____ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See maps in appendix A + B in report

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

USGS Topographic Maps
National Wetlands Inventory Maps

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	9	IEPA Springfield lab(Organics) Champaign lab(inorganics)	2-92
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	7	"	"
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
temp, Sp. cond + pH	for each private well sampled

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ■ AERIAL

02 IN CUSTODY OF IEPA
(Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS: Appendix A+B in report

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

water levels were collected during site reconnaissance

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

SSI 11/5-6/92

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Accra Plastics		238 Charles Ave		S. Beloit	IL	61080
Trenwyth Midwest Ind.		208 Charles Ave.		S. Beloit	IL	61080
North American Tool Corp		215 Elmwood Ave		S. Beloit	IL	61080

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
Hanson General Products Corp.		238 Charles Ave.		S. Beloit	IL	61080

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
General Hydraulics		301 Charles Ave		S. Beloit	IL	61080

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site reconnaissance 4/26/90 – 10/22/91

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. CURRENT OPERATOR *(Provide if different from owner)*

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY *(If applicable)*

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) *(List most recent first; provide only if different from owner)*

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES *(If applicable)*

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

IEPA files LZ1045 6022

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE	
05 CITY	06 STATE / 07 ZIP CODE	

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE	03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE	03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE	03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE	03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

IEPA files LZ0104500ZZ

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
ILD	984767806

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ● E. CONTAMINATED SOIL REMOVED — 02 DATE 9-10-90 — 03 AGENCY _____
04 DESCRIPTION NATCo removed 3870 ft³ of contaminated soil from beneath there New westward addition

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ■ G. WASTE DISPOSED ELSEWHERE — 02 DATE May 1986 — 03 AGENCY —
04 DESCRIPTION 112-120 55 gallon drums + 25-50 5 gallon pails were removed by Finks Industrial Waste (FIW) as contracted by the bankruptcy court

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

IEPA BLPC file L2010450022

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984767806

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ■ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

IEPA BLPC file L2010450022

APPENDIX D

TARGET COMPOUND LIST

TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane
Bromomethane
Vinyl Chloride
Chloroethane
Methylene Chloride
Acetone
Carbon Disulfide
1,1-Dichloroethene
1,1-Dichloroethane
1,2-Dichloroethene (total)
Chloroform
1,2-Dichloroethane
2-Butanone
1,1,1-Trichloroethane
Carbon Tetrachloride
Vinyl Acetate
Bromodichloromethane
1,2-Dichloropropane
cis-1,3-Dichloropropene
Trichloroethene
Dibromochloromethane
1,1,2-Trichloroethane
Benzene
trans-1,3-Dichloropropene
Bromoform
4-Methyl-2-pentanone
2-Hexanone
Tetrachloroethene
1,1,2,2-Tetrachloroethane
Toluene
Chlorobenzene
Ethylbenzene
Styrene
Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane
bis(2-Chloroethyl)Ether
Benzyl Alcohol
bis(2-Chloroisopropyl)Ether
N-Nitroso-Di-n-Propylamine
Nitrobenzene
Hexachlorobutadiene
2-Methylnaphthalene
1,2,4-Trichlorobenzene
Isophorone
Naphthalene
4-Chloroaniline
bis(2-chloroethoxy)Methane
Hexachlorocyclopentadiene
2-Chloronaphthalene
2-Nitroaniline
Acenaphthylene
3-Nitroaniline
Acenaphthene
Dibenzofuran
Dimethyl Phthalate
2,6-Dinitrotoluene
Fluorene
4-Nitroaniline
4-Chlorophenyl-phenylether
2,4-Dinitrotoluene
Diethylphthalate
N-Nitrosodiphenylamine
Hexachlorobenzene
Phenanthrene
4-Bromophenyl-phenylether
Anthracene
Di-n-Butylphthalate
Fluoranthene
Pyrene
Butylbenzylphthalate
bis(2-Ethylhexyl)Phthalate
Chrysene
Benzo(a)Anthracene
3,3'-Dichlorobenzidene
Di-n-Octyl Phthalate
Benzo(b)Fluoranthene
Benzo(k)Fluoranthene
Benzo(a)Pyrene
Indeno(1,2,3-cd)Pyrene
Dibenz(a,h)Anthracene
Benzo(g,h,i)Perylene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid
Phenol
2-Chlorophenol
2-Nitrophenol
2-Methylphenol
2,4-Dimethylphenol
4-Methylphenol
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
4-Chloro-3-methylphenol
2,4-Dinitrophenol
2-Methyl-4,6-dinitrophenol
Pentachlorophenol
4-Nitrophenol

Pesticide/PCB Target Compounds

alpha-BHC
beta-BHC
delta-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin Ketone
Endosulfan Sulfate
Methoxychlor
alpha-Chlorodane
gamma-Chlorodane
Toxaphene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260

Inorganic Target Compounds

Aluminum
Antimony
Arsenic
Barium
Beryllium
Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Potassium
Selenium
Silver
Sodium
Thallium
Vanadium
Zinc
Cyanide
Sulfide
Sulfate

APPENDIX E

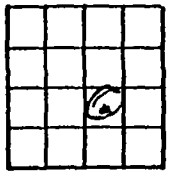
WELL LOGS

TED AND MAIL ORIGINAL TO STATE DE-
TATE OFFICE BUILD[illegible], SPRINGFIELD,
WATER SURVEYS SEC[illegible]N. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 10-8-70

. Property owner Chas. Fischer Sr. Well No. 1
Address RR 2 So. Beloit, Ill.
Driller Bloyer License No. 92-285
. Permit No. 9789 Date June 70
. Water from sandstone Formation 13. County Winnebago
at depth 120 to 150 ft. Sec. 1
. Screen: Diam. ____ in. Twp. 46N
Length: ____ ft. Slot ____ Rge. 1E
Elev. ____



. Casing and Liner Pipe

lam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Blk. St. 14# per ft.	0	120

SHOW LOCATION IN SECTION PLAT
100'NL, 250'EL, NW SE (permit)

. Size Hole below casing: 5 in.
. Static level 45 ft. below casing top which is 1 ft. above ground level. Pumping level 50 ft. when pumping at 8 gpm for 12 hours.

. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Sand	120	120
sand stone	10	130

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

IGNED Ralph Bloyer DATE Nov. 6-70

COUNTY No. 1562

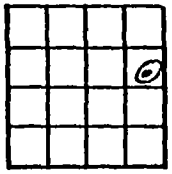
INNEBAGO 1-46N-1E

RE[illegible]STED AND MAIL ORIGINAL TO STATE
EAU ENVIRONMENTAL HEALTH, 535 WEST
701. DO NOT DETACH GEOLOGICAL/WATER
E PROPER WELL LOCATION.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 10-11-74

10. Property owner Ron Svendsen Well No. ____
Address So Beloit, Ill.
Driller Ed Greenfield License No. 92-582
11. Permit No. 33368 Date Sept. 25
12. Water from sandstone Formation 13. County Winnebago
at depth 117 to 127 ft. Sec. 1
14. Screen: Diam. ____ in. Twp. 46N
Length: ____ ft. Slot ____ Rge. 1E
Elev. ____



15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	Blk. PE. 11#ft.	0	117

SHOW LOCATION IN SECTION PLAT
100' SL, 100' WL, NW SE NE (permit)

16. Size Hole below casing: 4 in.
17. Static level 80 ft. below casing top which is 1 ft. above ground level. Pumping level 90 ft. when pumping at 10 gpm for 24 hours. Sub. pump set at 105'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
gravel + sand	30	30
clay + gravel	87	117
sandstone	10	127

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ed Greenfield DATE Nov. 11

COUNTY No. 23314

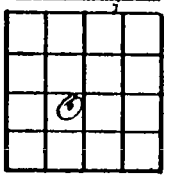
WINNEBAGO 1-46N-1E

QUESTED AND MAIL ORIGINAL TO STATE
OF ENVIRONMENTAL HEALTH, 535 WEST
DO NOT DETACH GEOLOGICAL/WATER
ROPER WELL LOCATION.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 9-27-74

9. Property owner Steve Namminga Well No. 1
Address R21 Blackhawk So Beloit, Ill.
Driller Ed Greenfield License No. 92-582
11. Permit No. 33369 Date Sept. 25
12. Water from sand Formation 13. County Winnebago
at depth 66 to 68 ft. Sec. 7
14. Screen: Diam. 4 in. Twp. 46 N
Length: 2 ft. Slot 15 Rge. 2E
Elev. ____



15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	Blk. P.E. 11# ft.	0	66
4	Johnson S.S. screen	66	68

SHOW LOCATION IN SECTION PLAT
50'SL, 50'WL of
NE NE SW
(Permit)

16. Size Hole below casing: _____ in.
17. Static level 48 ft. below casing top which is 1 ft. above ground level. Pumping level 51 ft. when pumping at 10 gpm for 3 hours. Submersible, set at 50'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
sand	68	68

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ed Trumfield DATE Oct. 7-74

COUNTY No. 23178

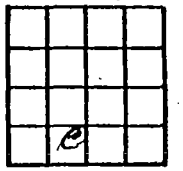
WINNEBAGO 7-46N-2E

REQUESTED AND MAIL ORIGINAL TO STATE
EAU OF ENVIRONMENTAL HEALTH, 535 WEST
701. DO NOT DETACH GEOLOGICAL/WATER
E PROPER WELL LOCATION.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 7/18/75

10. Property owner George Leonhard Well No. _____
Address 442 Whitewater S. Beloit
Driller Ed Greenfield License No. 92-582
11. Permit No. 39223 Date July 10
12. Water from Sand Formation 13. County Winnebago
at depth 63 to 65 ft. Sec. 7
14. Screen: Diam. 4 in. Twp. 46N
Length: 2 ft. Slot 15 Rge. 2E
Elev. ____



15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	Blk. P.E. 11# ft.	0	63
4	S.S. screen	63	65

SHOW LOCATION IN SECTION PLAT
50'SL 50'EL
NE SE SW
(permit)

16. Size Hole below casing: _____ in.
17. Static level 50 ft. below casing top which is 1 ft. above ground level. Pumping level 50 ft. when pumping at 10 gpm for 1 hours. Sub. pump set at 55'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
sand + gravel	6	6
sand	59	65

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ed Trumfield DATE Aug 1

COUNTY No. 23633

WINNEBAGO 7-46N-2E

WN South Beloit TOWNSHIP Roscoe MAP NO. 1
MPANY C. W. Varner No. R 2E
RM Wisconsin Power & Light #3 T. 46 N SEC. 5
THORITY C. W. Varner
EVATION 735 T.M.
)LLECTOR
INFIDENTIAL DATE DRILLED 1937

40 W. of Pershing St. 30 N. of Clark St.

COUNTY No. 31

STRATA	THICKNESS FEET	THICKNESS IN.	DEPTH FEET	DEPTH IN.
Black loam	3		3	
Gravel, coarse	11		14	
Gravel, fine	56		70	
Gravel, coarser	52		122	
Gravel, shows limestone and red shale	8		130	
Rock and shale	5		135	
Brown shale and gravel	3		138	
Gravel	12		150	
Gravel, some coarser	13		163	
Gray and brown sandrock	9		172	
Sand, brown	23		195	
Gray sand, some coarser	9		204	
Gravel, coarse	12		216	
Sand, gray	4		220	
Shale, brown, sandy	6		226	
Sandstone, gray	2		228	
Sandstone, gray	4		232	
Lime, reddish-gray	6		238	
Lime, blue, hard	40		278	
Lime, gray	17		295	
Shale, red	55		350	
Sandrock, gray	10		360	
Lime, gray, very hard	5		365	
Sand, light gray	17		382	
Lime, red, very hard	2		384	
Sand, white	4		388	
Lime, red	6		394	
White sandrock	18		412	
Sand	8		420	
Sandstone, gray	32		452	

UNTY Winnebago INDEX NO. 0105
ILL RECORD 5-46N-2E
1792--10M--3-38) ILLINOIS GEOLOGICAL SURVEY, URBANA

SHEET 2 T. 46N R. 2E S. 5
COMPANY C. W. Varner HOLE NO.
FARM Wisconsin Power & Light E NO. #3

NO.	STRATA	THICKNESS FEET	THICKNESS IN.	DEPTH FEET	DEPTH IN.
	Sandstone, dark brown, hard	11		463	
	Sandstone, gray	7		470	
	Shale, blue, sandy, hard	14		484	
	Sandstone, gray	48		532	
	Green copper oxide, shale	5		537	
	Red rock, dolomitic, sandy, hard	38		580	
	Shale, gray, hard	6		586	
	Sandstone, brown	4		590	
	Limerock, gray, sandy, hard	9		599	
	Sandstone, soft, gray	6		605	
	Sandstone, blue, hard, sharp	37		642	
	Sandstone, white, soft	4		646	
	Sandrock, dark brown, very hard	2		648	
	Lime, blue, sandy, very hard	2		650	
	Sandrock, white, soft	3		653	
	Lime, brown, very hard	4		657	
	Sand, white, soft	4		661	
	Lime, blue, hard	8		669	
	Sand, white, soft	5		674	
	Brown, lime, hard	3		677	
	Lime, brown	10		687	
	Lime, brown, soft	4		691	
	Sand, white	5		696	
	Lime, brown, hard	8		704	
	Sand, white, soft	56		760	
	Lime, hard, gray	4		764	
	Sand, white, fine	14		778	
	Lime, hard and gray	2		780	
	Sand, white	50		830	
	Lime, broken	3		833	
	Lime, blue	2		835	
	Sand, white, fine	30		865	
	Lime, broken, sandy	20		885	

COUNTY Winnebago INDEX NO. 0105
DRILL RECORD 5-46N-2E
(60560--15M--8-38) ILLINOIS GEOLOGICAL SURVEY, URBANA

ET 3 T. 46N R. 2E S. 5

IPANY C. W. Varner HOLE NO.

M Wisconsin Power & Light HOLE NO. #3

STRATA	THICKNESS FEET	THICKNESS IN.	DEPTH FEET	DEPTH IN.
Lime, blue, sandy	40		925	
Lime, gray, sandy	18		943	
Lime, blue, sandy	5		948	
Shale, brown	3		951	
Lime, gray, hard	4		955	
Dolomite, blue, hard	8		963	
Dolomite, gray, very hard	4		967	
Lime, gray	7		974	
Lime, blue	4		978	
Sand, gray	14		992	
Shale, blue, hard	1		993	
Sand, fine, firm	5		998	
Shale, red, firm	2		1000	
Sand, fine, firm	7		1007	
Lime, red, not very hard	3		1010	
Lime, red, hard	10		1020	
Sand, gray	11		1031	
Sand, fine, red, hard	13		1044	
Sand, gray, fine, hard	31		1075	
Dolomite, gray, hard, fine	7		1082	
Lime, brown, sandy	5		1087	
Red sand, soft to hard, fine	78		1165	
Sand, light red, fine	20		1185	

Diameter: 17" to 352'
12 3/4" to bottom at 1185'
Casing: 230'5" of 18" O.D. pipe from surface.

NTY Winnebago INDEX NO 0105

ILL RECORD

50560--15M--8-38) ILLINOIS GEOLOGICAL SURVEY, URBANA 5-46N-2E

REQUESTED AND MAIL ORIGINAL TO STATE
EAU OF ENVIRONMENTAL HEALTH, 535 WEST
701. DO NOT DETACH GEOLOGICAL/WATER
E PROPER WELL LOCATION.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 12-6-74

10. Property owner Orland Cruse Well No. _____
Address 537 S Bluff S. Beloit Ill.
Driller Ed Evenfield License No. 92-382
11. Permit No. 34072 Date Oct. 23
12. Water from Sand Formation 13. County Winnebago
at depth 68 to 70 ft. Sec. 6
14. Screen: Diam. 4 in. Twp. 46 N
Length: 2 ft. Slot 15 Rge. 2E
Elev. _____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	Blk. PE. 11#ft.	0	68
4	Johnson 55 screen	68	70

SHOW LOCATION IN SECTION PLAT

100' SL, 100' EL, SE SE NW (permit)

16. Size Hole below casing: _____ in.
17. Static level 50 ft. below casing top which is 1 ft. above ground level. Pumping level 53 ft. when pumping at 10 gpm for 4 hours. Sub. pump

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Sand topsoil	30	30
Sand	40	70

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ed Evenfield DATE Dec. 30

COUNTY No. 23416

NNEBAGO 6-46N-2E

STATE OFFICE BUILDING, SPRINGFIELD,
L/WATER SURVEYS [illegible]TION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 4-5-72

10. Property owner *Rockton Sewage Di.* Well No. *1*
Address *Rockton Ill.*
Driller *Ed Greenfield* License No. *92-582*
11. Permit No. *17211* Date *9-13-72*
12. Water from *Sand stone* (Formation) 13. County *Winnebago*
at depth *82* to *120* ft. Sec. *24*
14. Screen: Diam. ____ in. Twp. *46N*
Length: ____ ft. Slot ____ Rge. *1E*
Elev. ____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	Blk Stl	0	82

SHOW LOCATION IN SECTION PLAT
600'NL, 500'WL of SW NW NW (Permit)

16. Size Hole below casing: *6* in.
17. Static level *12* ft. below casing top which is *2* ft. above ground level. Pumping level *40* ft. when pumping at *55* gpm for *8* hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
clay + gravel	20	20
Sand	10	30
clay + gravel	48	78
Sand stone	42	120
Industrial well		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED *Ed Greenfield* DATE *April 11-72*

COUNTY No. 2316

WINNEBAGO 24-46N-1E

SURVEYS SECTION. BE SURE TO

This Well Currently identified as Rockton #6 by Il. EPA/D.PWS. See Ref# 17 pages 8, 1877

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 1-20-69

10. Dept. Mines and Minerals permit No. 6291 Year 1968
11.* Property owner Village of Rockton Well No. 5
Address Village Hall, Rockton, Illinois
Driller Milaeger Well & Pump License No. 92-267
12. Water from Galesville (Formation) 13. County Winnebago
at depth 550 to 728 ft. Sec. 24
14. Screen: Diam. — in. Twp. 46½N
Length: ____ ft. Slot ____ Rng. 1E
Elev. ____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
20	Steel - 78#	0	45
16	Steel - 65#	0	200

SHOW LOCATION IN SECTION PLAT
21' SL, 240' WL of SW (permit)

16. Size Hole below casing: 15-1/4 in.
17. Static level 100 ft. below casing top which is 2 ft. above ground level. Pumping level 195 ft. when pumping at 934 gpm for 24 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Glacial Drift	45	45
Galena Platteville Dolomite	105	150
St. Peter Sandstone	165	315
Franconian Dolomite	235	550
Galesville Sandstone	178	728
** Municipal water supply*		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

MILAEGER WELL AND PUMP CO. INC.
1245 N. 62nd St., Milwaukee, Wis.
SIGNED *[signature]* DATE Mar. 25, 1969

S.S. # 56035

COUNTY No. 1856

WINNEBAGO 24-46N-1E

(37329—20M—5-54)

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
...p soil		0	1
...oarse sand and gravel		1	20
...ne sand		20	42
...oarse sand and gravel		42	120
...mestone		120	----

...ameter, length and type of material left in well:
40' of shutter screen made of bronze. #5 openings.
80' of 16" inside casing made of 3/8" steel with welded connections.
20' of 42" outside casing made of 5/16 Steel with welded connections.
20 yards of gravel used in well. Size: buckshot.
...st of well. Did you use test or permanent pump? test Size of bowl: 12" SSKLC
...wer used: E: horse power: 110.
...ze of orifice: 10" X 8"
...mping test - measurements from ground level:

...me	G.P.M.	Static	Drawdown	Running Level
... hr. test	1500	43	24	67'

...covery in 5 minutes: full.
...d you seal bottom of well? yes Thickness: ½"
Material: steel plate.
...s well under-reamed? no
...l screen was placed at bottom.
...pth of well (from ground level to top of plug): 120'
...s cement placed around or between any of the casings? yes - ready mix from ground level to ~~80' between 42" & 16", 9 bag mixture.~~

27428

...NY	Layne-Western Company	NO.	1
	City of Rockton	COUNTY NO.	139
...DRILLED	July 1956		
...RITY	Layne-Western Company		
...ON	NEc of ...wn; SE ¼ of section		
	WINNEBAGO		13-46N-1E

(37329—20M—5-54)

ILLINOIS GEOLOGICAL SURVEY, URBANA

...ge 1

Strata	Thickness	Top	Bottom
Summary Sample Study by G. H. Emrich 5/57			
Pleistocene series			
Soil, sandy	2		2
Gravel, very coarse; sand, trace silt, grayish-brown, very coarse to coarse, little medium, calcareous	18		20
Sand, slightly gravelly, trace silt, brown, very coarse to coarse, little medium, calcareous	22		42
Gravel, very coarse; sand, grayish-brown, very coarse to medium, little fine, calcareous, clean	23		65
Sand, grayish-buff, fine to coarse, calcareous, clean	5		70
Gravel, very coarse; sand, grayish-brown, fine to very coarse, calcareous, clean	15		85
Gravel, very coarse; little sand, as above	5		90
Gravel, very coarse; sand, as above	25		115
Gravel, very coarse, calcareous, clean	5		120
"Limestone"			120
			TD

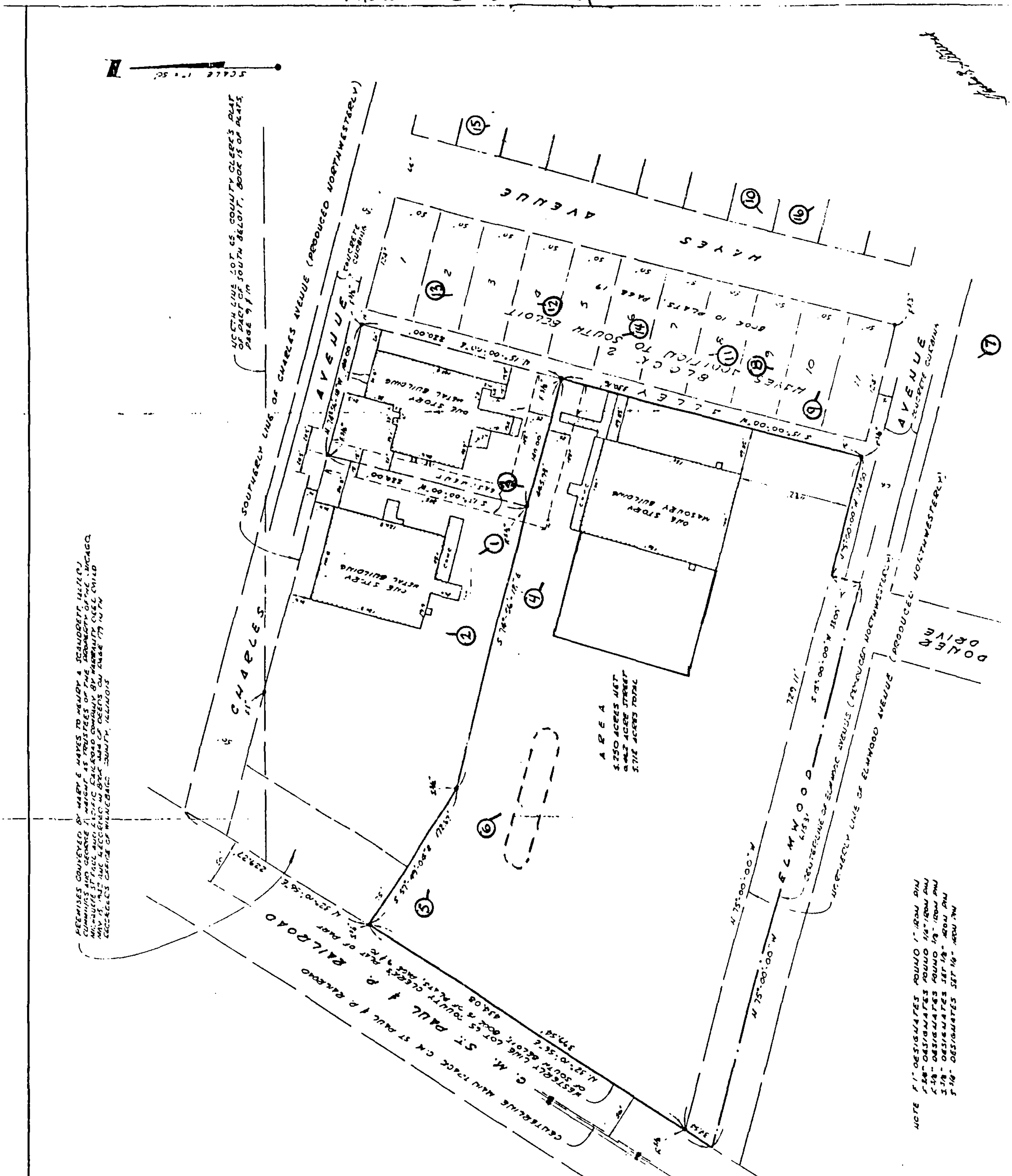
← This well currently identified as Rockton #5 by IL EPA/D.P.W.S See Ref #17 Pages 875 & 876

COMPANY	Layne-Western Company	NO.	1-56
FARM	City of Rockton	COUNTY NO.	139
DATE DRILLED	1956		
AUTHORITY	G. H. Emrich		
ELEVATION			
LOCATION	NE SE		
COUNTY	WINNEBAGO	S.S. #27475	13-46N-1E

APPENDIX F

IEPA SITE PHOTOGRAPHS

Photo Location Map



DATE: Nov. 5, 1991

TIME: 1:20 PM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 1

LOCATION: W of Hayes Ave., between Charles Ave. and Elmwood Ave. in South Beloit, IL, (X103).

PICTURE TAKEN TOWARD: NW

COMMENTS: The location is 60' NW of NATC bldg. in the asphalt behind Trenwyth Industries

DATE: Nov. 5, 1991

TIME: 2:45 PM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 2

LOCATION: W of Hayes Ave., between Charles Ave. and Elmwood Ave. in South Beloit, IL, (X104).

PICTURE TAKEN TOWARD: N

COMMENTS: The location is 35' W and 37' N of the new dock at NATC.

DATE: Nov. 5, 1991

TIME: 3:45 PM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 3

LOCATION: W of Hayes Ave., between Charles Ave. and Elmwood Ave. in South Beloit, IL, (X102).

PICTURE TAKEN TOWARD: S

COMMENTS: The location is 40' N of the NE corner of the truck loading dock at NATC.

DATE: Nov. 5, 1991

TIME: 4:30 PM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 4

LOCATION: W of Hayes Ave., between Charles Ave. and Elmwood Ave. in South Beloit, IL, (X101).

PICTURE TAKEN TOWARD: E-SE

COMMENTS: The location is 40.5' W of NATC dock in the center of the ditch.

DATE: Nov. 5, 1991

TIME: 4:50 PM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 5

LOCATION: W of Hayes Ave., between Charles Ave. and Elmwood Ave. in South Beloit, IL, (X105).

PICTURE TAKEN TOWARD: E

COMMENTS: The location is 90' W of where the asphalt ends in a low spot.

DATE: Nov. 5, 1991

TIME: 5:15 PM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 6

LOCATION: W of Hayes Ave., between Charles Ave. and Elmwood Ave. in South Beloit, IL, (X106).

PICTURE TAKEN TOWARD: E

COMMENTS: The location is 47' from the E end of the stockpiled soil W of NATC.

DATE: Nov. 5, 1991

TIME: 5:45 PM

PHOTOGRAPH TAKEN BY:

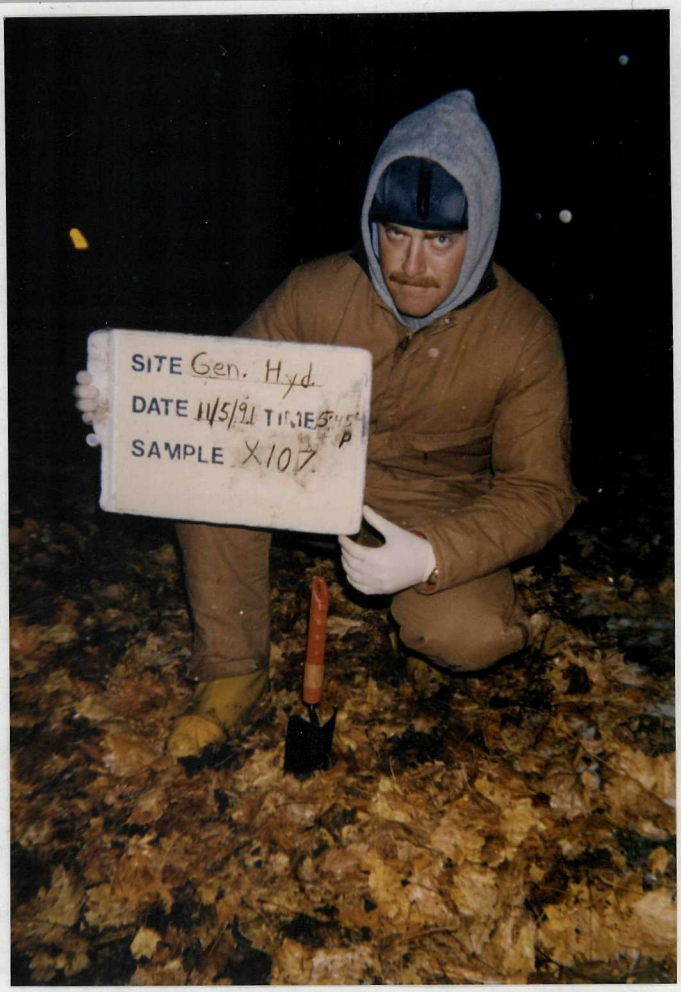
Timothy J. Murphy

PHOTOGRAPH NUMBER: 7

LOCATION: St. Peters School on Elmwood Ave. in Beloit, IL, (X107).

PICTURE TAKEN TOWARD: NW

COMMENTS: The location is 22' S of Elmwood Ave. and 39' E of the sidewalk on the school's W side.



DATE: Nov. 6, 1991

TIME: 9:25 AM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 8

LOCATION: On Hayes Ave. in South Beloit, IL, (G205).

PICTURE TAKEN TOWARD: S

COMMENTS: This is the Klinkhammer residence at 528 Hayes Ave.

DATE: Nov. 6, 1991

TIME: 10:00 AM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 9

LOCATION: On Hayes Ave. in South Beloit, IL, (G206).

PICTURE TAKEN TOWARD: E

COMMENTS: This is the Perry residence at 530 Hayes Ave.

DATE: Nov. 6, 1991

TIME: 10:40 AM

PHOTOGRAPH TAKEN BY:

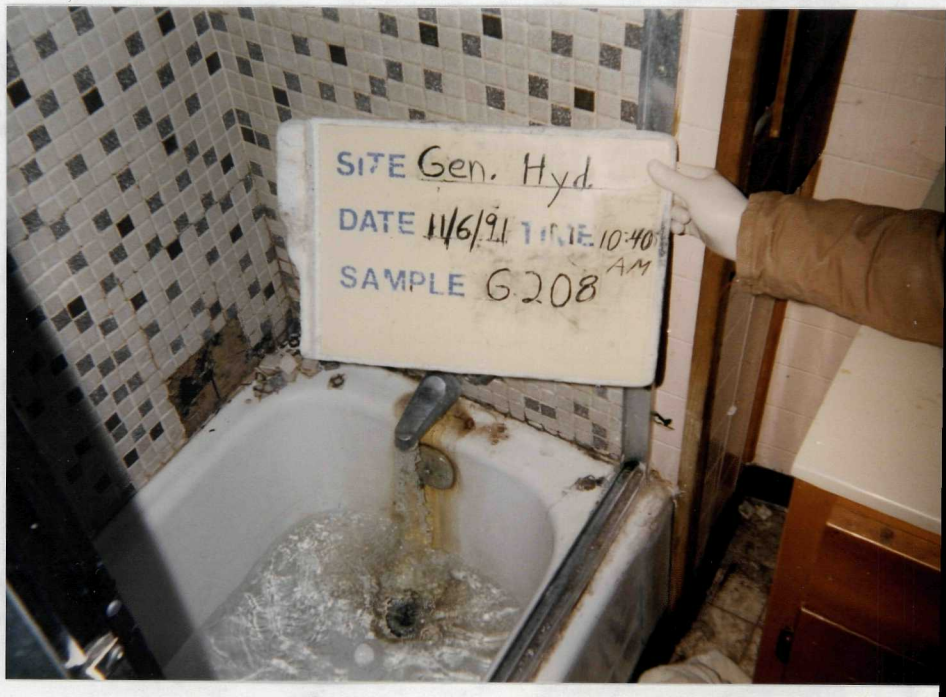
Timothy J. Murphy

PHOTOGRAPH NUMBER: 10

LOCATION: On Hayes Ave. in South Beloit, IL, (G208).

PICTURE TAKEN TOWARD: SW

COMMENTS: This is the Willie residence at 521 Hayes Ave.



DATE: Nov. 6, 1991

TIME: 11:15 AM

PHOTOGRAPH TAKEN BY:

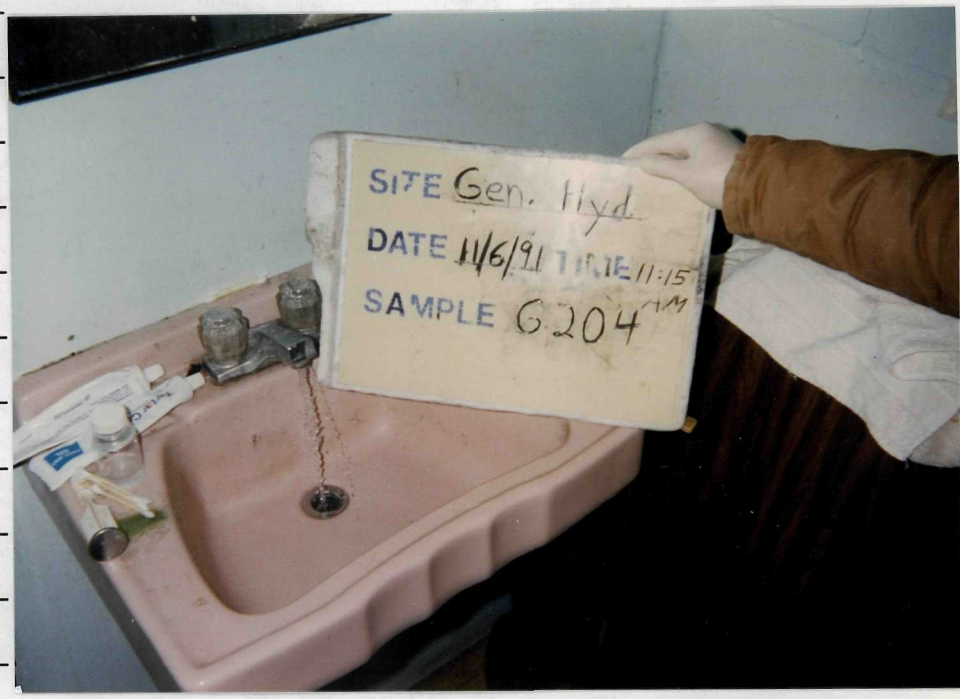
Timothy J. Murphy

PHOTOGRAPH NUMBER: 11

LOCATION: On Hayes Ave. in South Beloit, IL, (G204).

PICTURE TAKEN TOWARD: N

COMMENTS: This is the Nieves residence at 526 Hayes Ave.



DATE: Nov. 6, 1991

TIME: 11:50 AM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 12

LOCATION: On Hayes Ave. in South Beloit, IL, (G202).

PICTURE TAKEN TOWARD: N

COMMENTS: This is the Schmidt residence at 522 Hayes Ave.

DATE: Nov. 6, 1991

TIME: 12:20 PM

PHOTOGRAPH TAKEN BY:

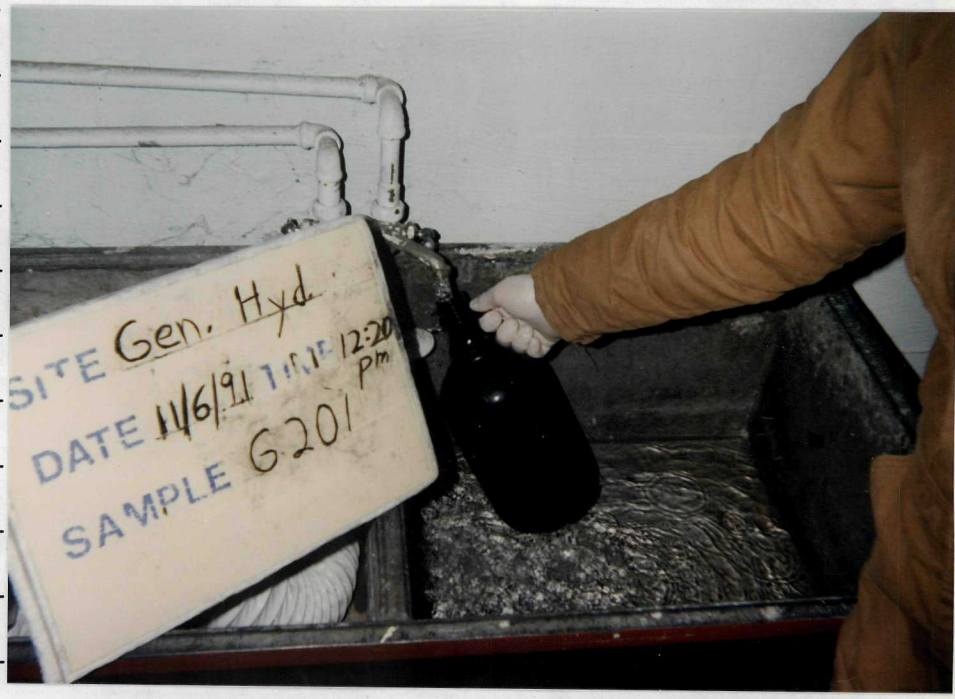
Timothy J. Murphy

PHOTOGRAPH NUMBER: 13

LOCATION: On Hayes Ave. in South Beloit, IL, (G201).

PICTURE TAKEN TOWARD: S

COMMENTS: This is the Pearson residence at 508 Hayes Ave.



DATE: Nov. 6, 1991

TIME: 12:55 PM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 14

LOCATION: On Hayes Ave. in South Beloit, IL, (G203).

PICTURE TAKEN TOWARD: NW

COMMENTS: This is a 5 family dwelling at 524 Hayes Ave.

DATE: Nov. 6, 1991

TIME: 1:30 PM

PHOTOGRAPH TAKEN BY:

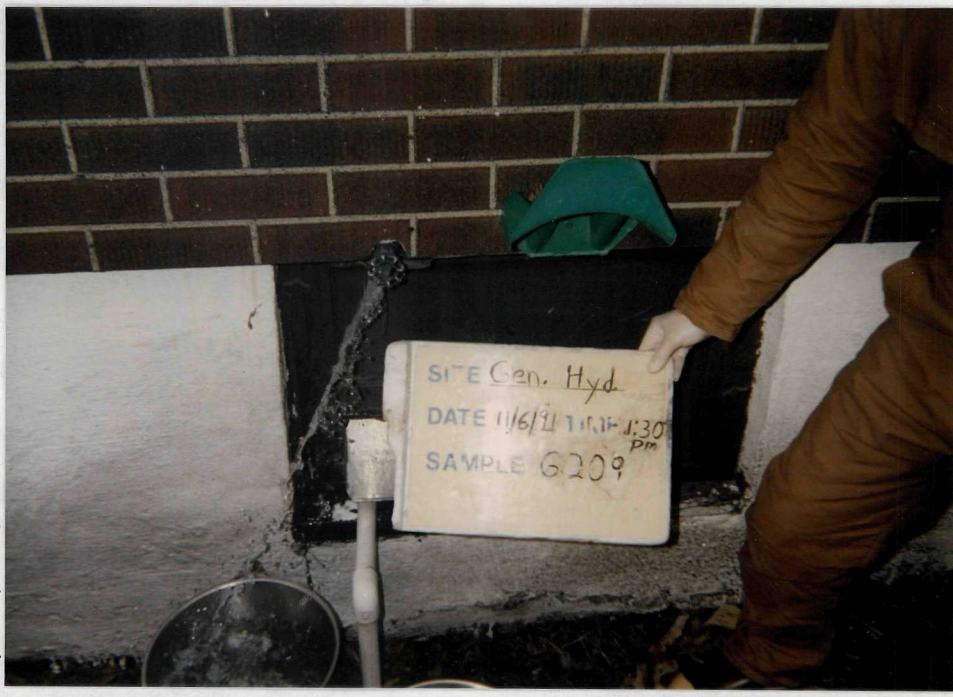
Timothy J. Murphy

PHOTOGRAPH NUMBER: 15

LOCATION: On Hayes Ave. in South Beloit, IL, (G209).

PICTURE TAKEN TOWARD: S

COMMENTS: This is the McMahon residence at 528 Hayes Ave.



DATE: Nov. 6, 1991

TIME: 2:35 PM

PHOTOGRAPH TAKEN BY:

Timothy J. Murphy

PHOTOGRAPH NUMBER: 16

LOCATION: On Hayes Ave. in South Beloit, IL, (G207).

PICTURE TAKEN TOWARD: SE

COMMENTS: This is the Baden residence at 527 Hayes Ave.

APPENDIX G

1987 RAPPS REPORT
CONTAINS MONITOR WELL LOGS AND GROUNDWATER FLOW MAPS

M. Rapps Associates, Inc. 2387 WEST MONROE, SUITE 123, SPRINGFIELD, ILLINOIS 62704 — (217) 787-2118

ENVIRONMENTAL ENGINEERING

September 17, 1987

Illinois Environmental Protection Agency
Enforcement Section
2200 Churchill Road
P.O. Box 19276
Springfield, Illinois 62794-9276

ATTN: Steve Strauss

(217) 782-5544

RE: S. Beloit/Magnetic Data
Carriers - Hanson Equipment Co.
I.D. No.: 2010455012

Dear Steve:

In follow-up to our September 2, 1987 meeting regarding the above site, enclosed are the following.

1. An excerpt from the USGS South Beloit Quadrangle Topographic Map showing the location of the former Hanson Equipment Company property.

2. A site map of the property indicating the names of the present occupants of the buildings. The locations of the recently installed monitoring wells are also shown.

3. Information regarding the installation of the four monitoring wells.

4. Monitoring well data summary for the sampling which occurred on June 15, 1987.

5. Piezometric surface map indicating the direction of groundwater flow at the time of the June 15, 1987 sampling.

6. Contour plots of the concentrations of selected parameters from the analysis results for the June 15, 1987 sampling.

7. Complete analysis results for the June 15, 1987 sampling.

Since our meeting, we have been able to confirm the existence of a waterwell located on property northwest of the subject site. This property is presently owned by Trendwith Industries. The well is located inside the facility building (See Site Diagram). According to Trendwith, the well is presently in use and supplies water for employee sanitary facilities. The well is 1.5 inches in diameter and 15 feet deep. Trendwith pumps about 400 gallons of water per day from the well. Tremdwith indicated that the well is contaminated with chlorinated organics and that they filter the water with an activated carbon unit. They have an analysis of the unfilter water and they indicated that they would send such to me shortly.

Should you have any questions on the enclosed information, please call.

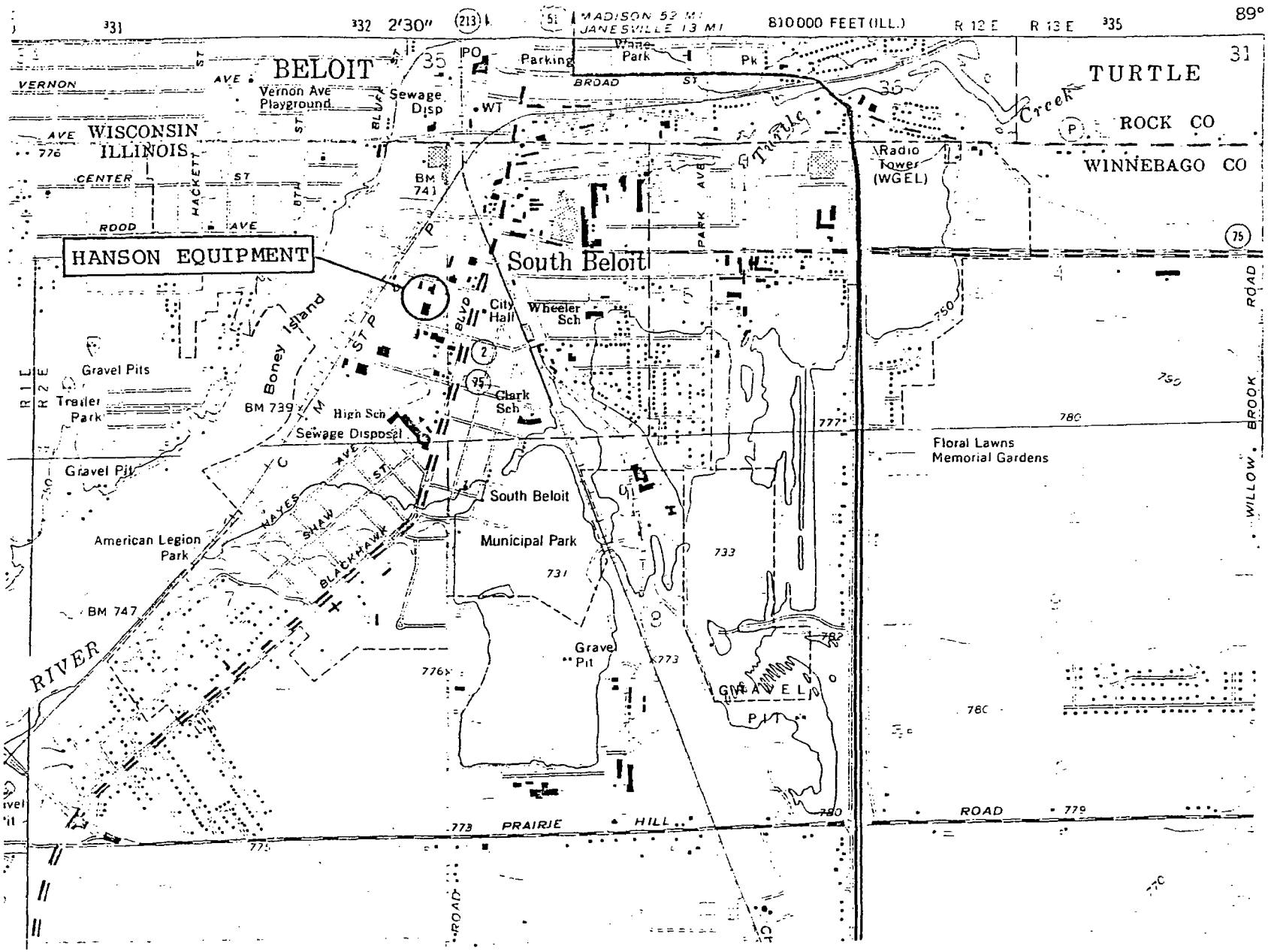
Sincerely,

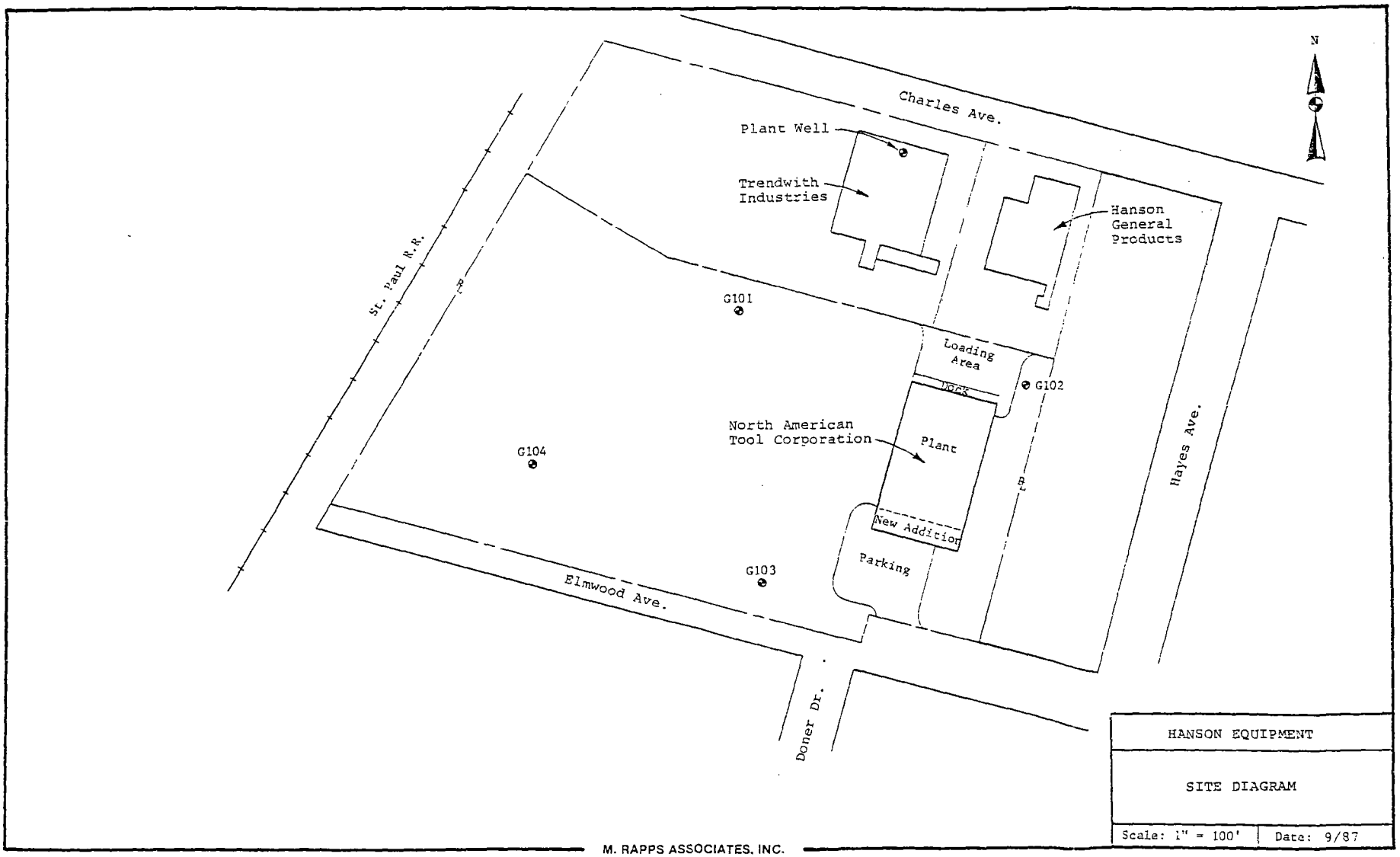
Daniel V. Flynn

Daniel V. Flynn
M. RAPPS ASSOCIATES, INC.

DVF/jh

cc: Steve Balsley
Bob Carson
Bob Wengrow


HANSON EQUIPMENT
BELOIT
South Beloit
TURTLE
WISCONSIN
ILLINOIS
ROCK CO
WINNEBAGO CO
Vernon Ave Playground
Sewage Disp
Parking
Waite Park
Pk
Radio Tower (WGEL)
City Hall
Wheeler Sch
Clark Sch
High Sch
Sewage Disposal
Gravel Pits
Trailer Park
Gravel Pit
Boney Island
South Beloit Municipal Park
American Legion Park
Floral Lawns Memorial Gardens
Grave Pit
GRAVEL PIT
BM 747
BM 739
BM 741
RIVER
PRAIRIE HILL ROAD
WILLOW BROOK ROAD
Creek
MADISON 52 MI
JANESVILLE 13 MI
810000 FEET (ILL.)
R 12 E
R 13 E
89°


N
Charles Ave.
Plant Well
Trendwith Industries
Hanson General Products
St. Paul R.R.
G101
Loading Area
Dock
G102
North American Tool Corporation
Plant
G104
New Addition
Parking
G103
Elmwood Ave.
Doner Dr.
Hayes Ave.
HANSON EQUIPMENT
SITE DIAGRAM
Scale: 1" = 100'
Date: 9/87
M. RAPPS ASSOCIATES, INC.

Professional Service Industries, Inc.
A & H/Flood Engineering Division

June 5, 1987

DeBruyne, Yalden & Olsen
838 North Main Street
Rockford, Illinois 61103

Attention: Mr. Joseph Olsen

Re: Monitor Well Installation
Hanson Products
South Beloit, Illinois
PSI File No.: 152-75073

Gentlemen:

Presented herein are the boring logs and monitor well installation diagrams for work performed at the above referenced project. It has been a pleasure to have been of service to you on this project. If you have any questions, please call.

Very truly yours,

A&H/FLOOD ENGINEERING DIVISION

Gregory R. Reuter
Branch Manager

Thomas S. LeDonne, P.E.
Illinois 34585
Vice President

GRR/TSL:sjp
cc: (3) M. Rapps Associates, Inc.
(1) Barrick, Switzer, Long,
Balsley & Van Evera

PROJECT AUTHORIZATION

Authorization to perform this work was as per the signed June 9, 1987 proposal (PSI No. 152-105) from Professional Service Industries, Inc. to DeBruyne, Yalden & Olsen.

FIELD EXPLORATION

Four soil borings were drilled at the approximate locations as shown on the enclosed Plan of Borings. The borings were drilled with a drilling rig equipped with a rotary head and were advanced using 3¼ inch I.D. hollow stem auger. As requested, no samples were obtained and the borings were logged based on the auger cuttings.

Borings G101 and G102 were offset to the approximate locations as shown on the enclosed Plan of Borings. The borings were relocated upon instructions by Mr. Roger Taylor of North American Tool.

Prior to drilling, and between borings, the hollow-stem auger and stainless steel well pipe was washed with Alconox®, which is a non-forming detergent, rinsed and steam cleaned. Water used during this cleaning operation was supplied on-site by the client.

SUBSURFACE CONDITIONS

The materials encountered during the boring operations have been visually classified and are described in detail on the enclosed boring logs.

The stratification of the soils, as shown on the boring logs, represents the soil conditions in the actual boring locations, and other variations may occur between the borings. Lines of demarcation represent the approximate boundary between the soil types, but the transition may be gradual.

It is to be noted that, whereas the borings are drilled and sampled by experienced drillers, it is sometimes difficult to record changes in stratification within narrow limits.

Generally black organic silt was encountered from the ground surface in all borings to depths ranging from approximately four (4) to six (6) feet below grade. An approximate two-foot thick stratum of gray sandy silt was also encountered underlying the black organic silt in boring G104.

Next, a stratum of tan clayey coarse sand and fine to coarse gravel was encountered the boring completion depths of twenty (20) feet below existing grade. During the boring operations, this clayey sand and gravel had entered the hollow stem auger and prior to installation of the monitor wells, this clayey sand and gravel was removed using wash boring techniques.

Groundwater was measured in borings G101, G103 and G104 at depths of six (6) to seven (7) feet below grade while drilling. Even though no water was measured in boring G102 upon completion of drilling, efforts to bail the water introduced into the boring during the wash boring operation proved useless since water kept entering the auger from the surrounding soils.

MONITOR WELL INSTALLATION

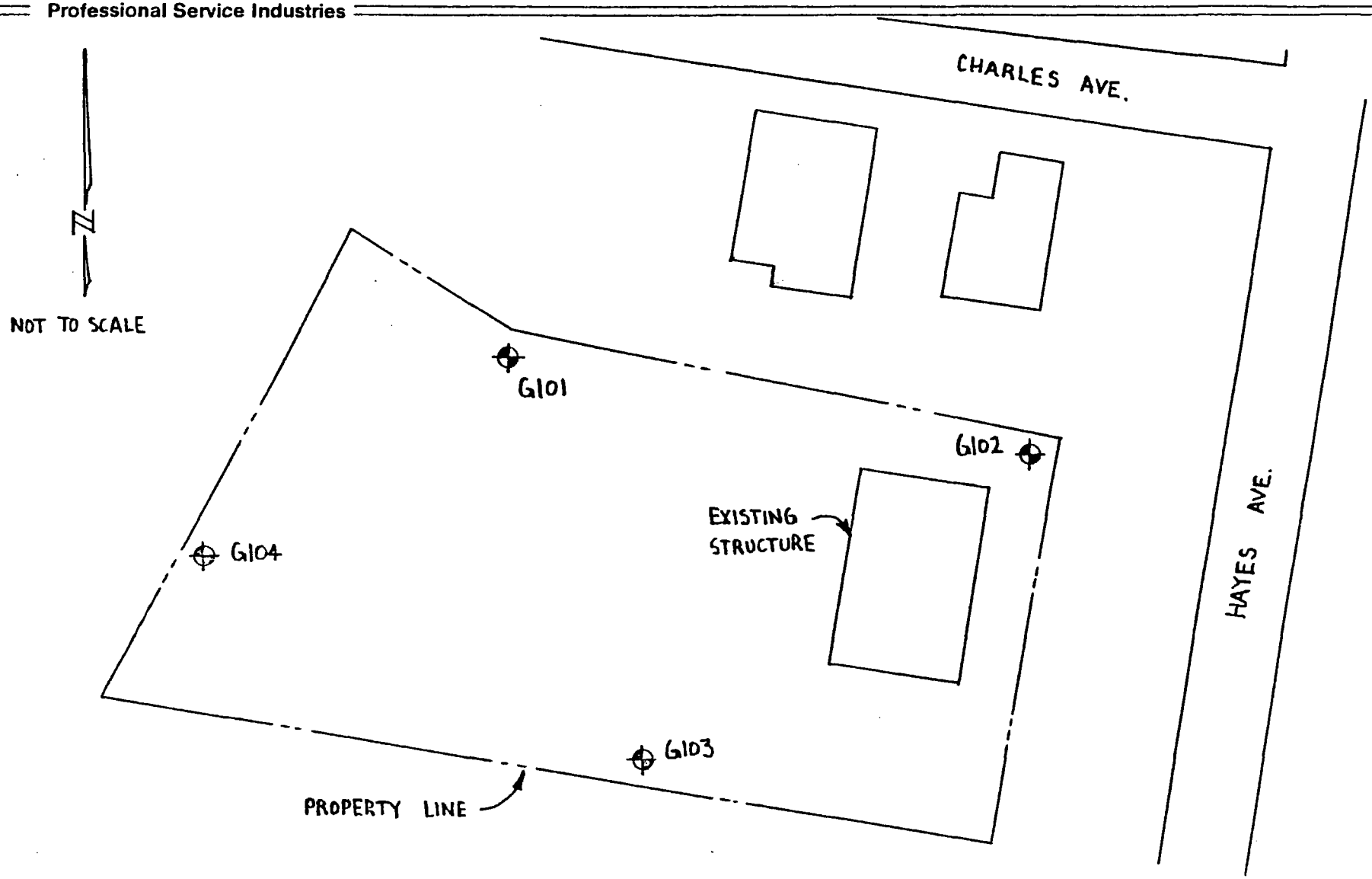
Upon completion of drilling, monitor wells were installed in each of the four borings. A monitor well installation diagram for each well is presented on the corresponding boring logs. All monitor wells were constructed as instructed by M. Rapps Associates, Inc.

Each well consisted of two-inch diameter, stainless steel 316 pipe. A ten-foot section of #10 slotted stainless steel 316 screen was attached to the bottom of each well. Silica sand was used as a sand pack around the well

screen. A two-foot thick bentonite pellet seal was constructed above the sand pack and the remaining bore hole annulus was grouted to the surface with cement/bentonite grout. A concrete pad, protective wall cover, and key alike locks were installed at the surface. Three sets of keys were retained by Mr. Roger Taylor at North American Tool and one set was retained by PSI.

All wells were developed upon completion using a Teflon® bailer. The wells were bailed until clean water was observed.

Professional Service Industries



PROJECT NAME

Monitor Well Installation
Hanson Products
South Beloit, Illinois

PLAN OF BORINGS

PROJECT NO.
152-75073

DATE
June 3-4, 1987

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring G101

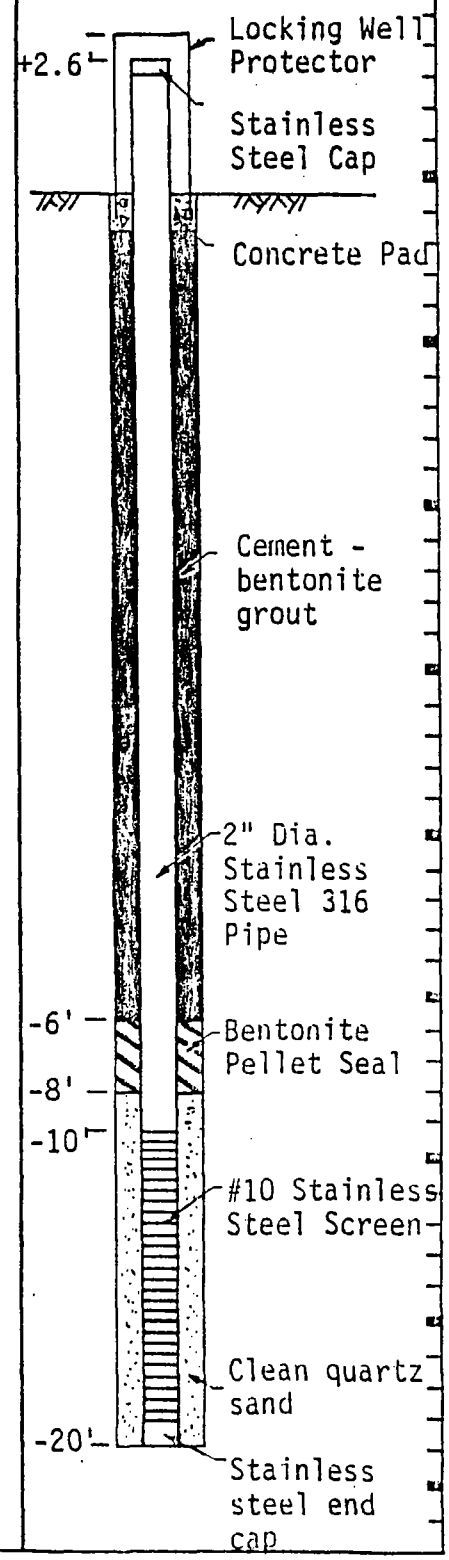
Project Name: Monitor Well Installation
Hanson Products
South Beloit, Illinois

Date of Boring: June 4, 1987

Site: _____

Project No.: 152-75073

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	MONITOR WELL INSTALLATION
SURFACE					
Black organic SILT, with occasional sand					
Tan clayey coarse SAND and fine to coarse GRAVEL	10'				
	20'				
Total depth of boring = 20' Water measured at 6' in boring while drilling					



Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring G102

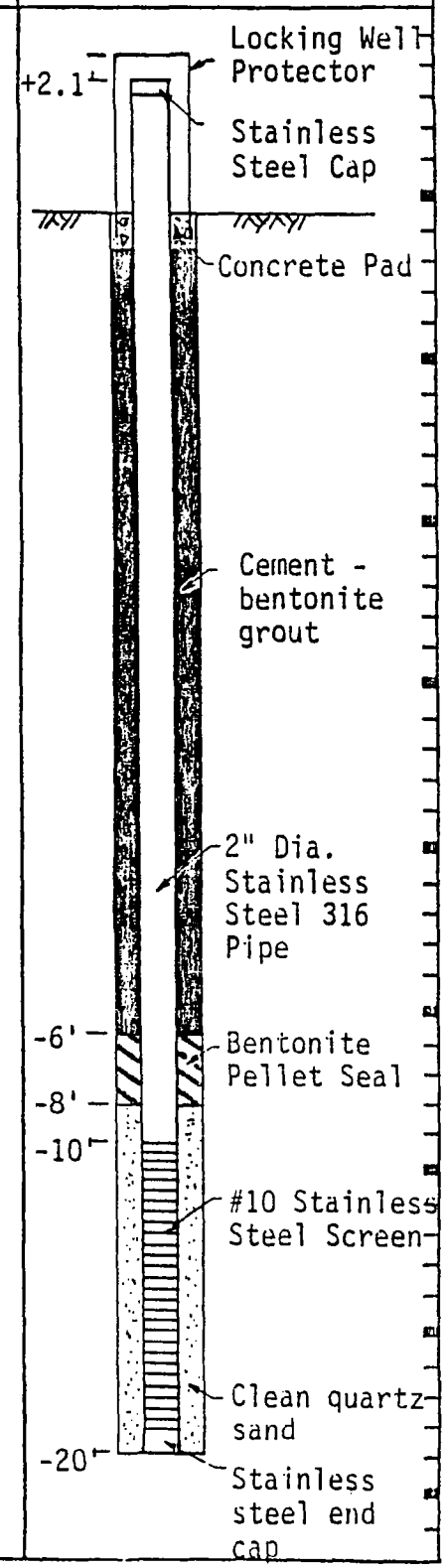
Project Name: Monitor Well Installation
Hanson Products

Date of Boring: June 4, 1987

Site: South Beloit, Illinois

Project No.: 152-75073

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	MONITOR WELL INSTALLATION
SURFACE					
Black organic SILT, with occasional fine gravel					
Tan clayey coarse SAND and fine to coarse GRAVEL, wet	10'				
	20'				
Total depth of boring = 20'					



Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring G103

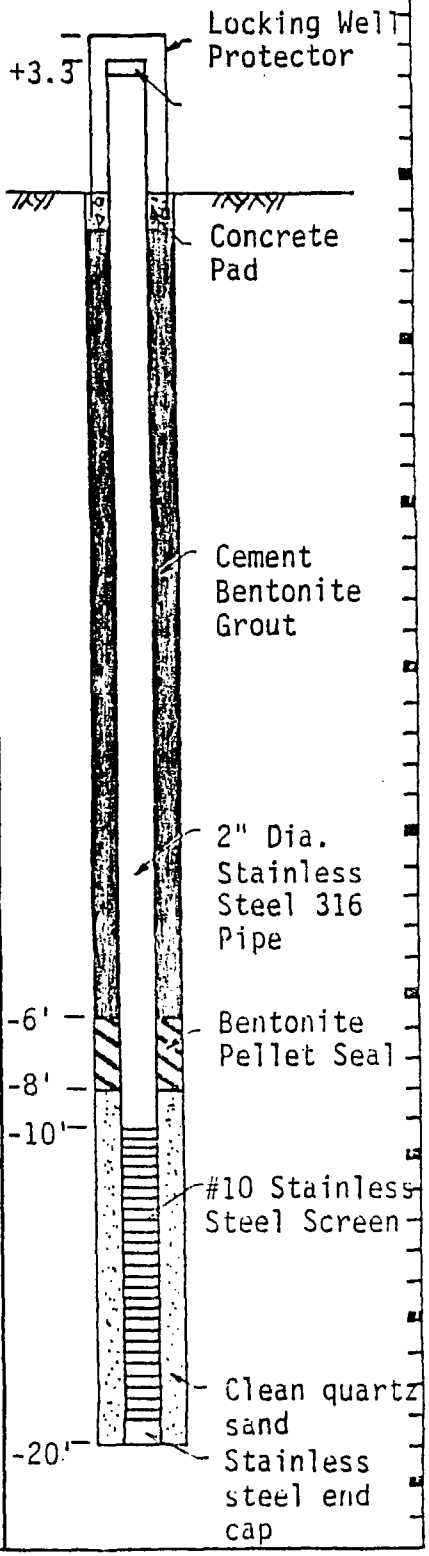
Project Name: Monitor Well Installation
Hanson Products
South Beloit, Illinois

Date of Boring: June 3, 1987

Site: _____

Project No.: 152-75073

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	MONITOR WELL INSTALLATION
SURFACE					
Black organic SILT					
Tan clayey coarse SAND and fine to coarse GRAVEL	10'				
Total depth of boring = 20'	20'				
Water measured at 6' in boring while drilling					



Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring G104

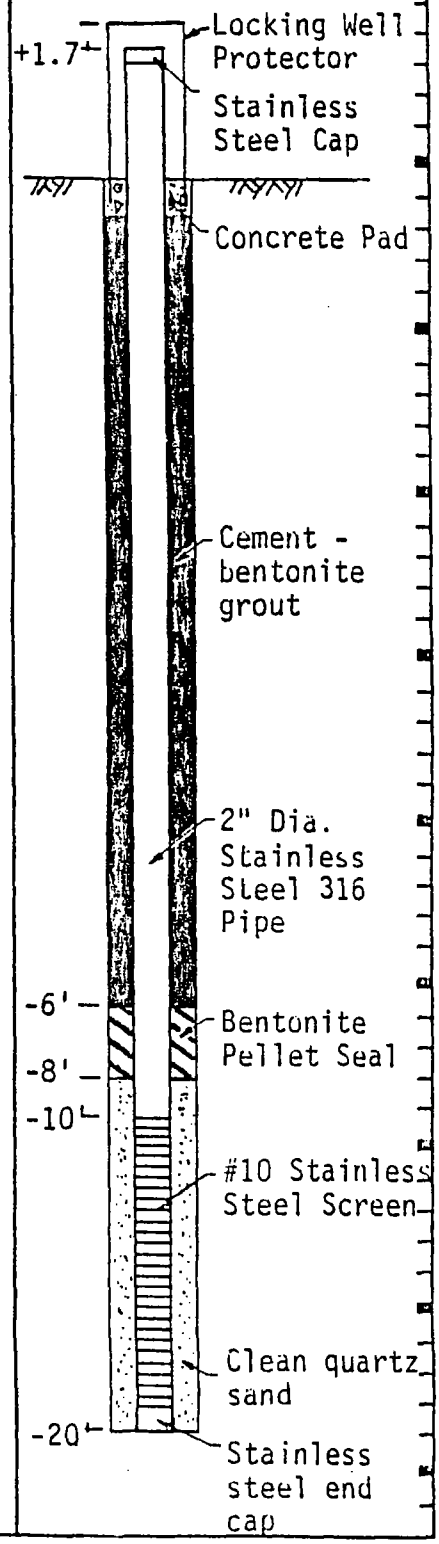
Project Name: Monitor Well Installation
Hanson Products

Date of Boring: June 3, 1987

Site: South Beloit, Illinois

Project No.: 152-75073

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	MONITOR WELL INSTALLATION
SURFACE					
Black organic SILT					
Gray sandy SILT					
Tan clayey coarse SAND and fine to coarse GRAVEL	10'				
	20'				
Total depth of boring = 20' Water measured at 7' in boring while drilling					

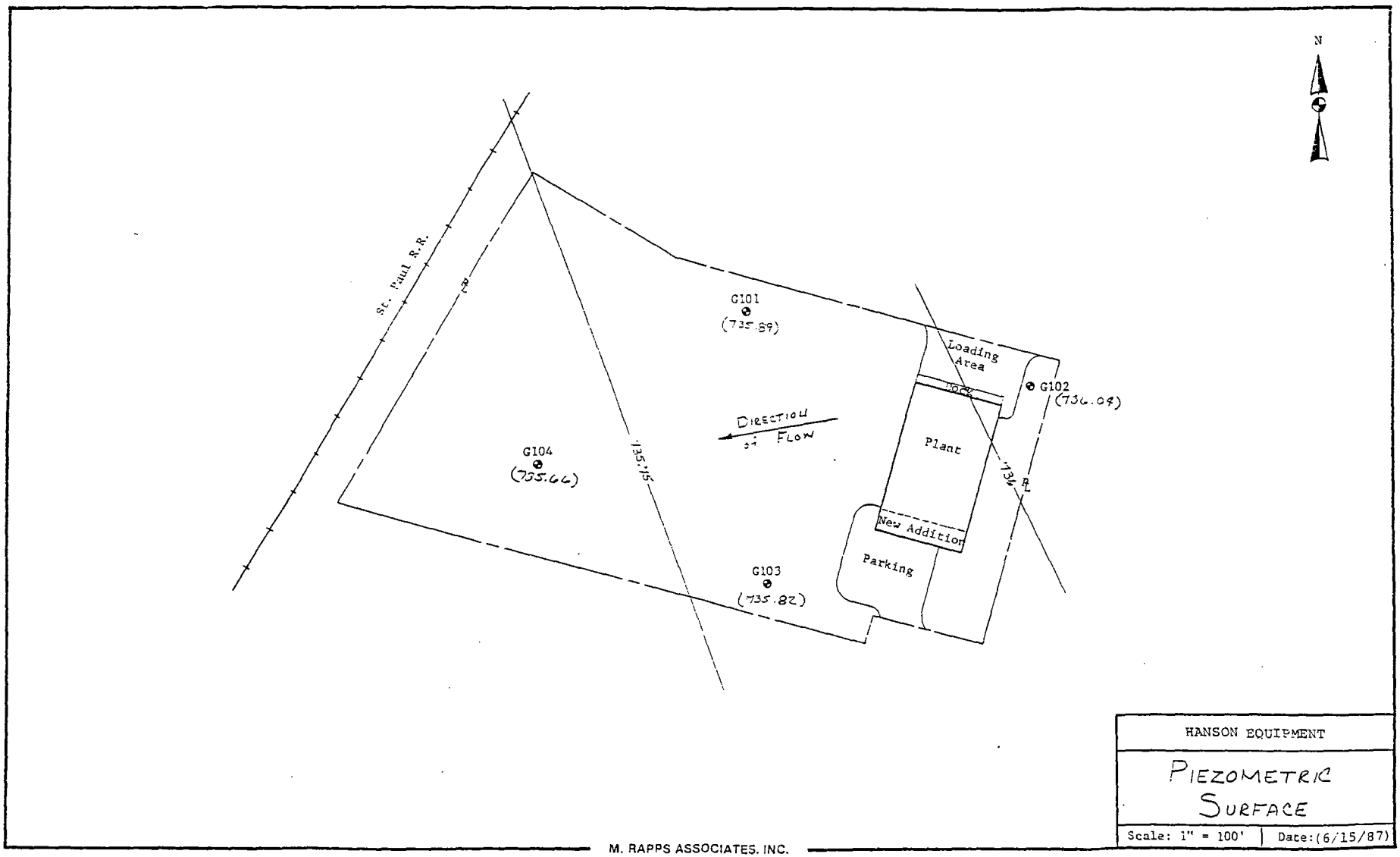


HANSON PRODUCTS

MONITORING WELL DATA SUMMARY

(6-15-87)

Well Number	Top of Pipe	Ground Surface	Water Elevation
G101	742.36	739.34	735.89
G102	742.89	740.25	736.04
G103	741.72	738.30	735.82
G104	740.21	738.43	735.66

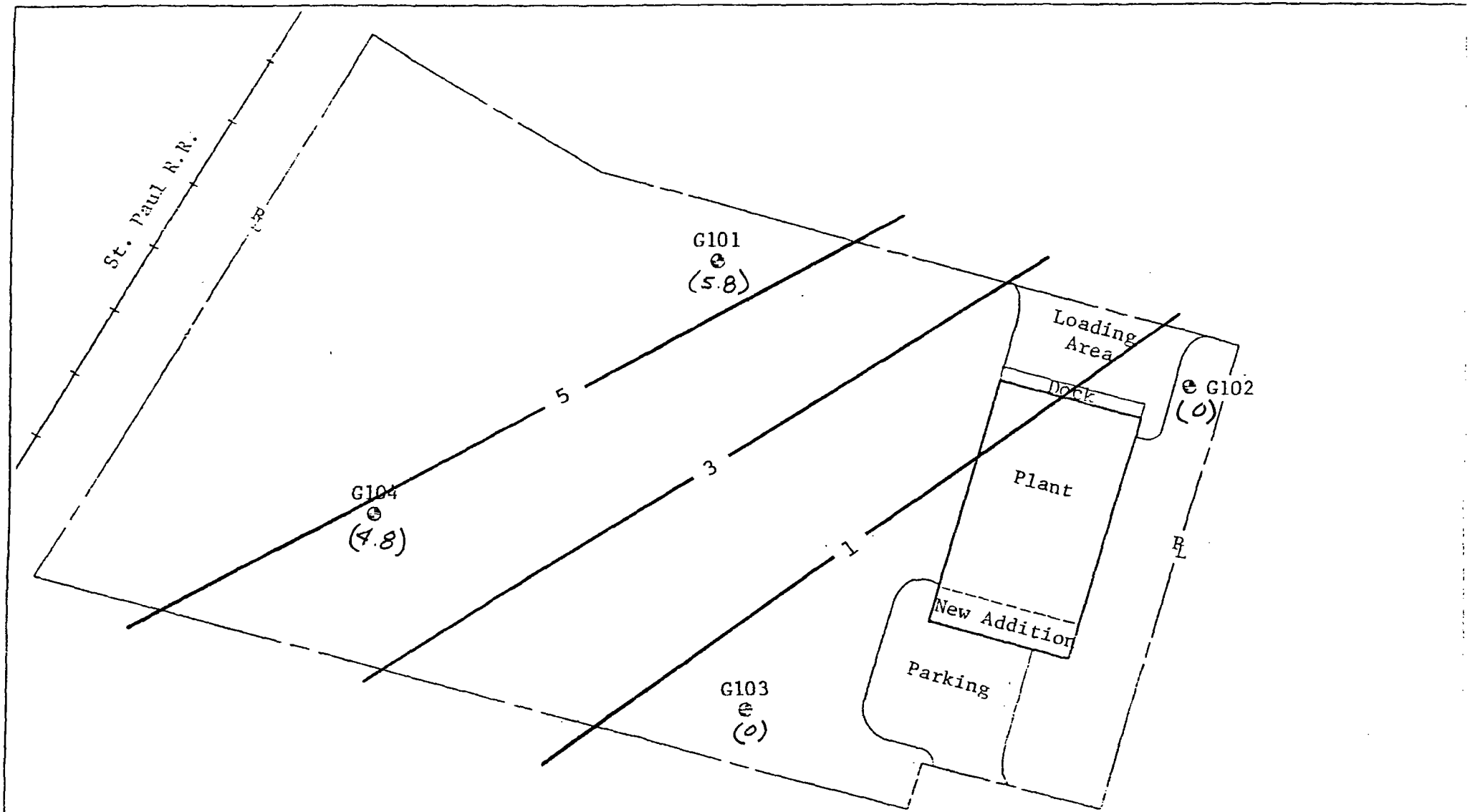


HANSON EQUIPMENT

PIEZOMETRIC SURFACE

Scale: 1" = 100' | Date:(6/15/87)

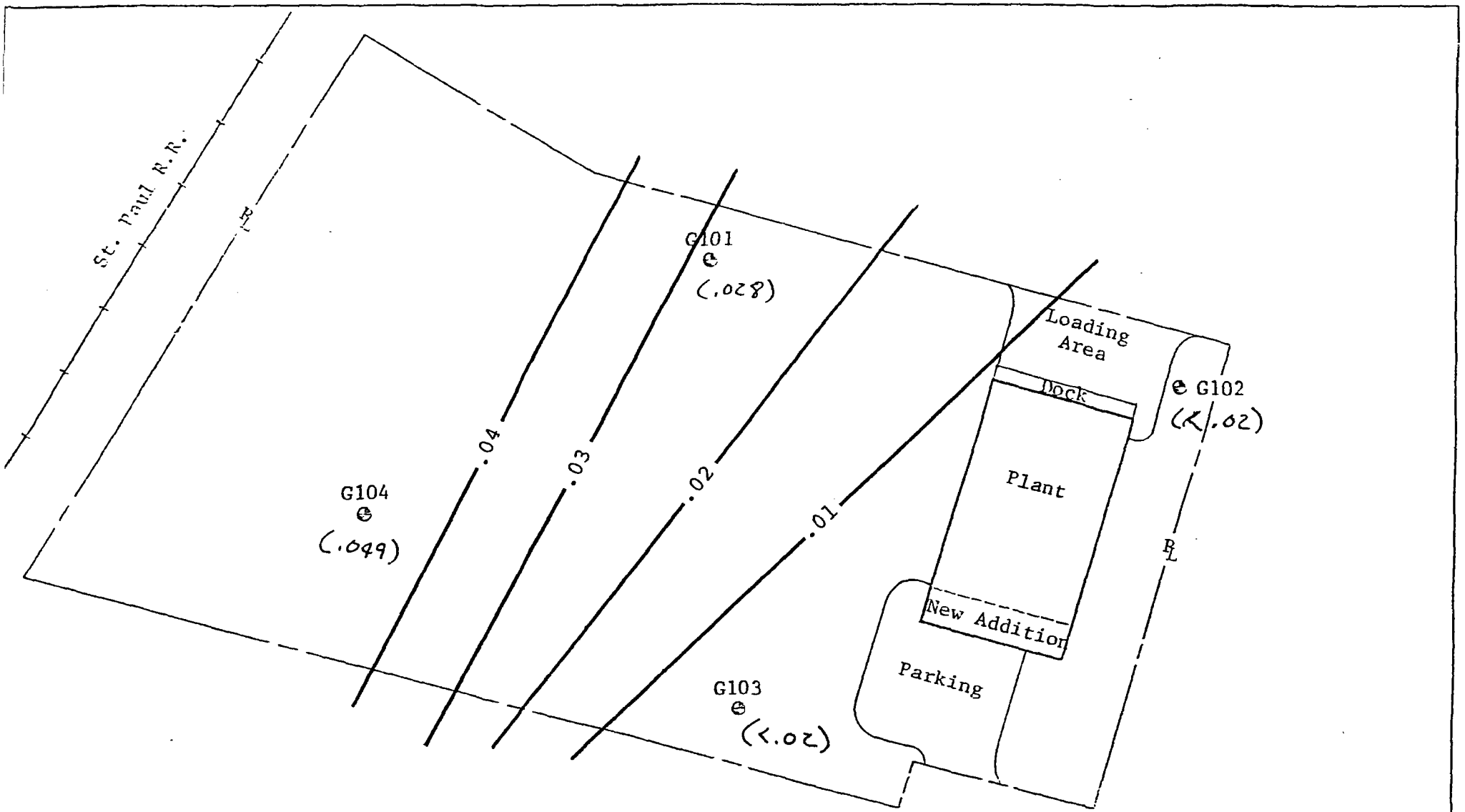
M. RAPPS ASSOCIATES, INC.



HANSON EQUIPMENT

Tetrachloroethylene
(PPb)

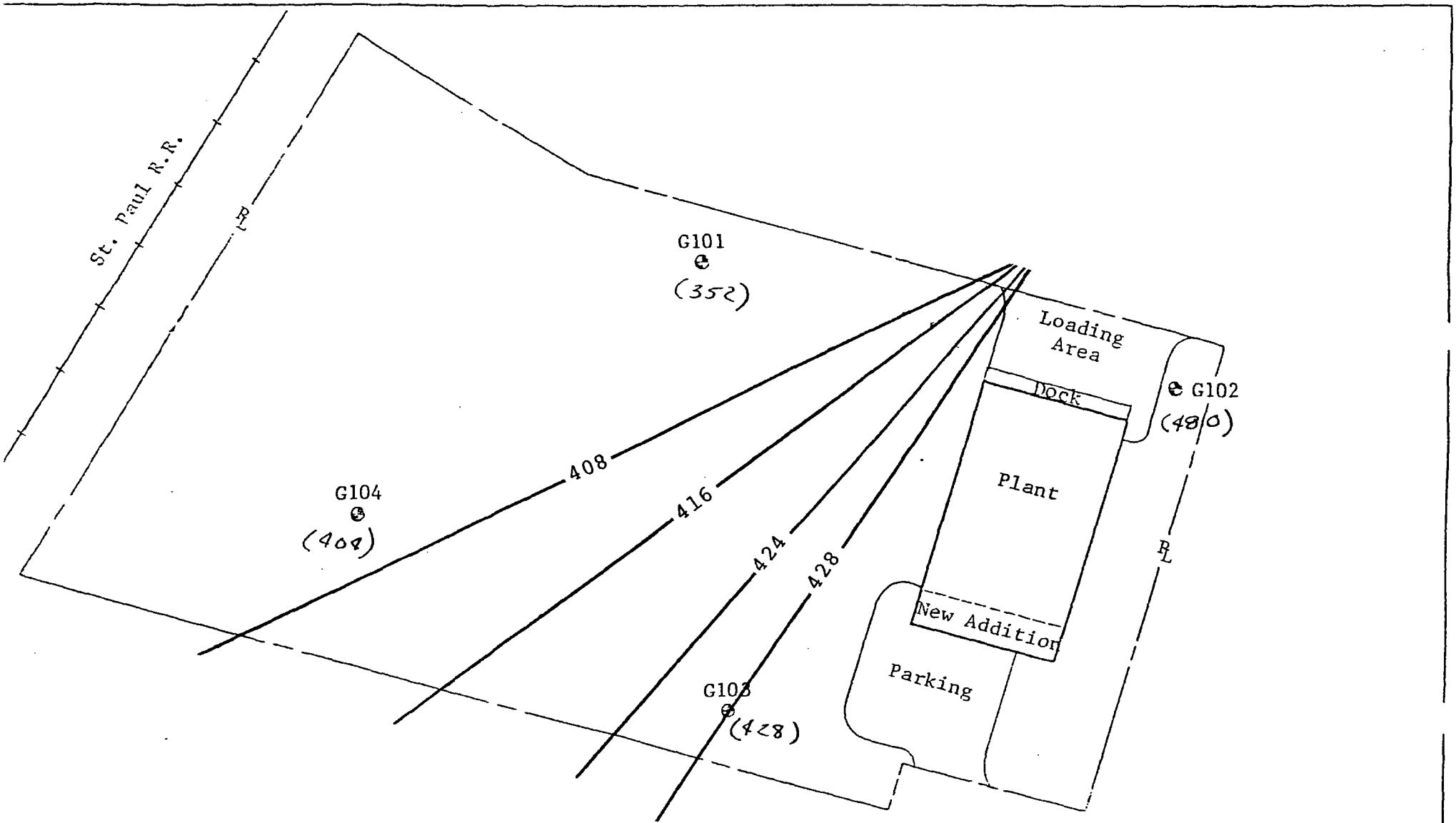
Scale: 1"=100'



HANSON EQUIPMENT

Total Organic Halogens (PPb)

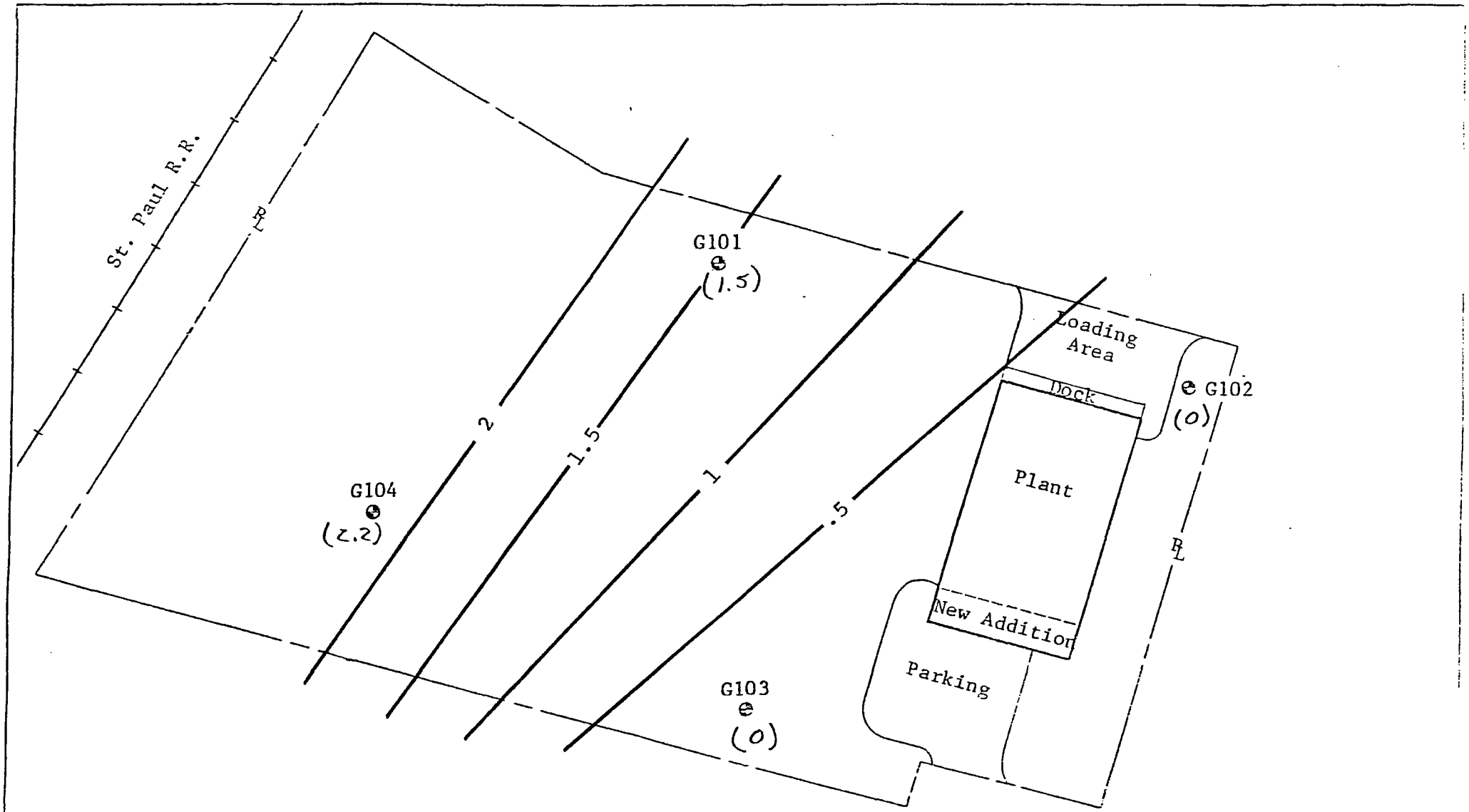
Scale: 1"=100'



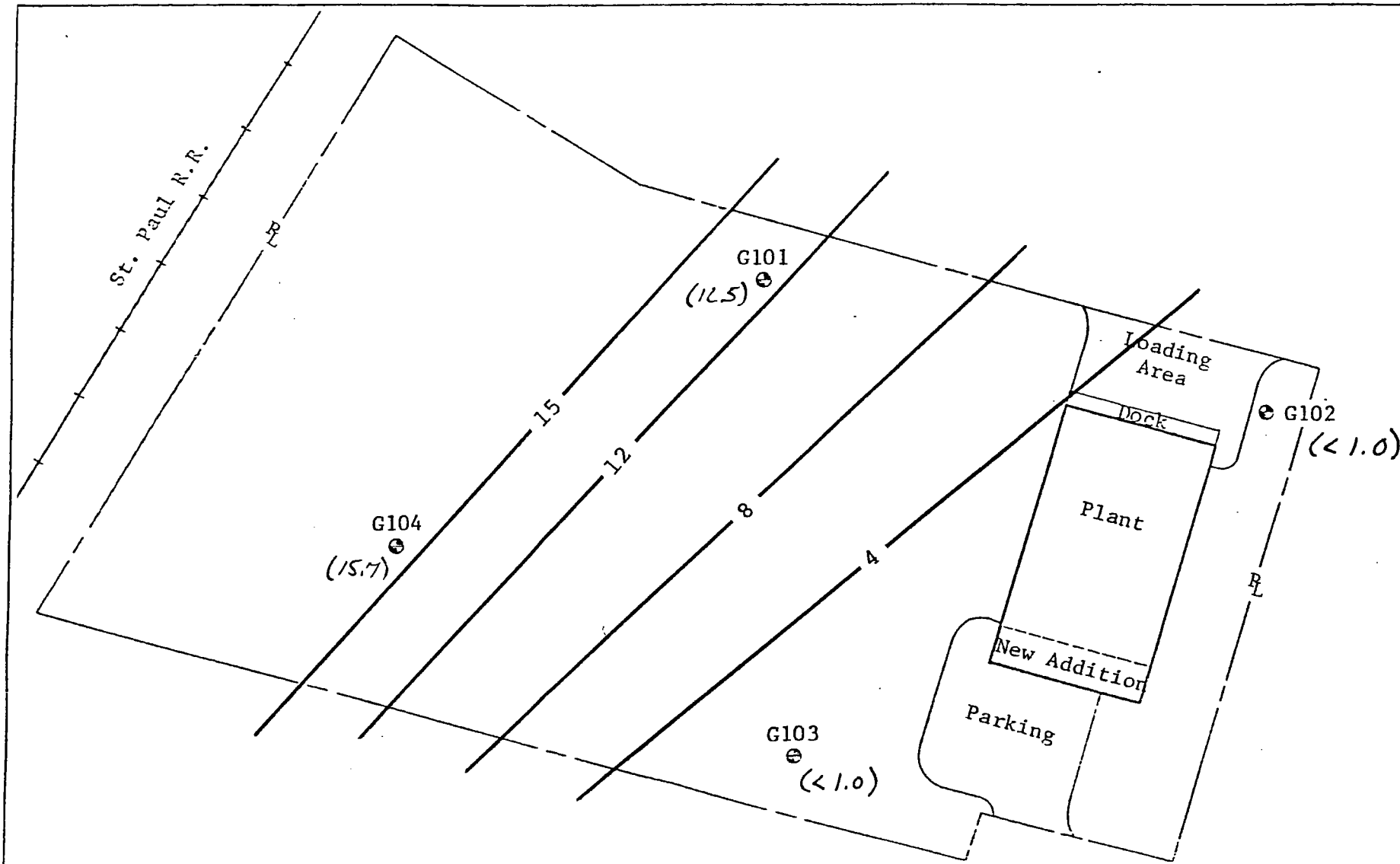
HANSON EQUIPMENT

Total Dissolved Solids (PPb)

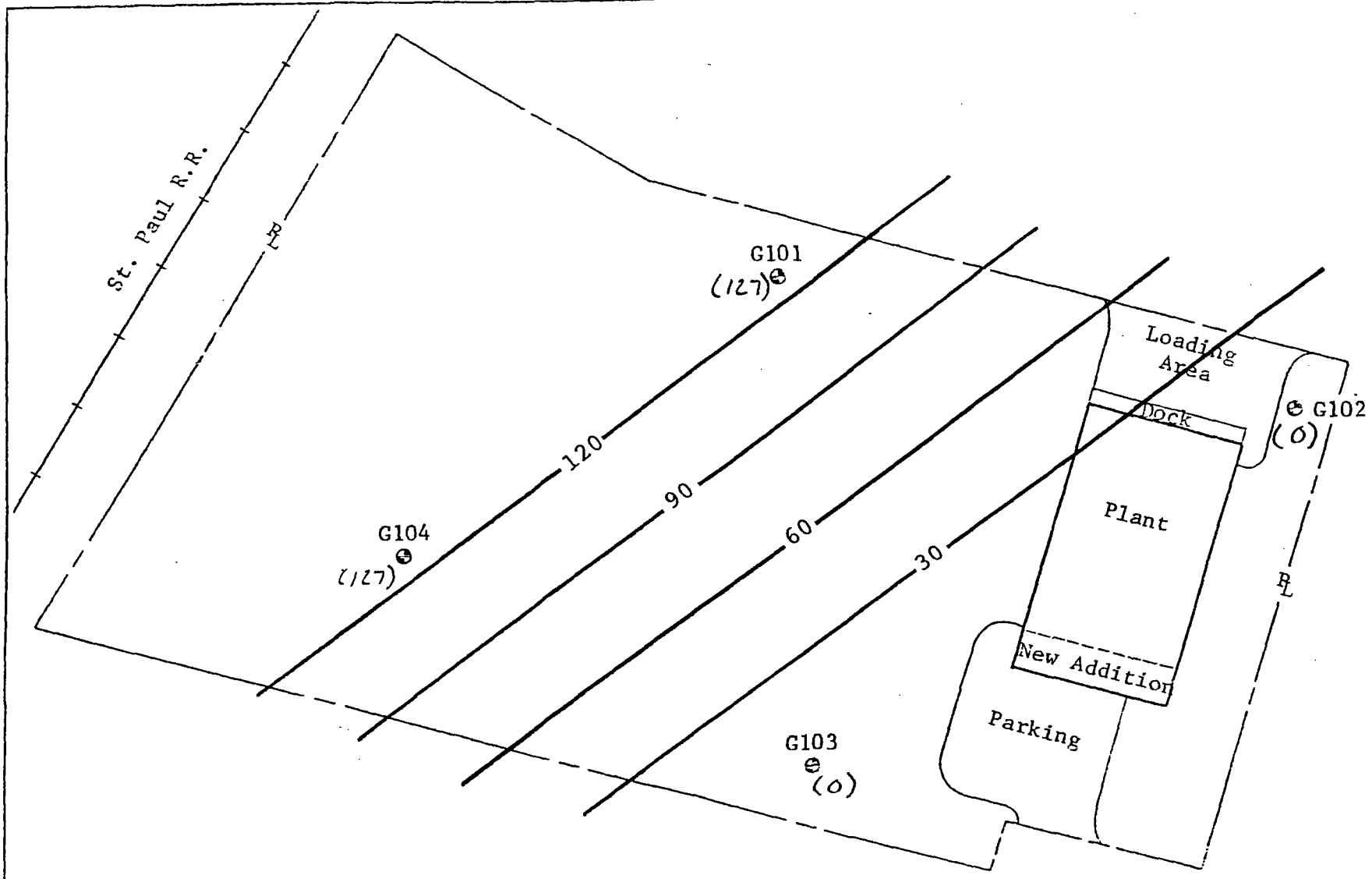
Scale: 1"=100'



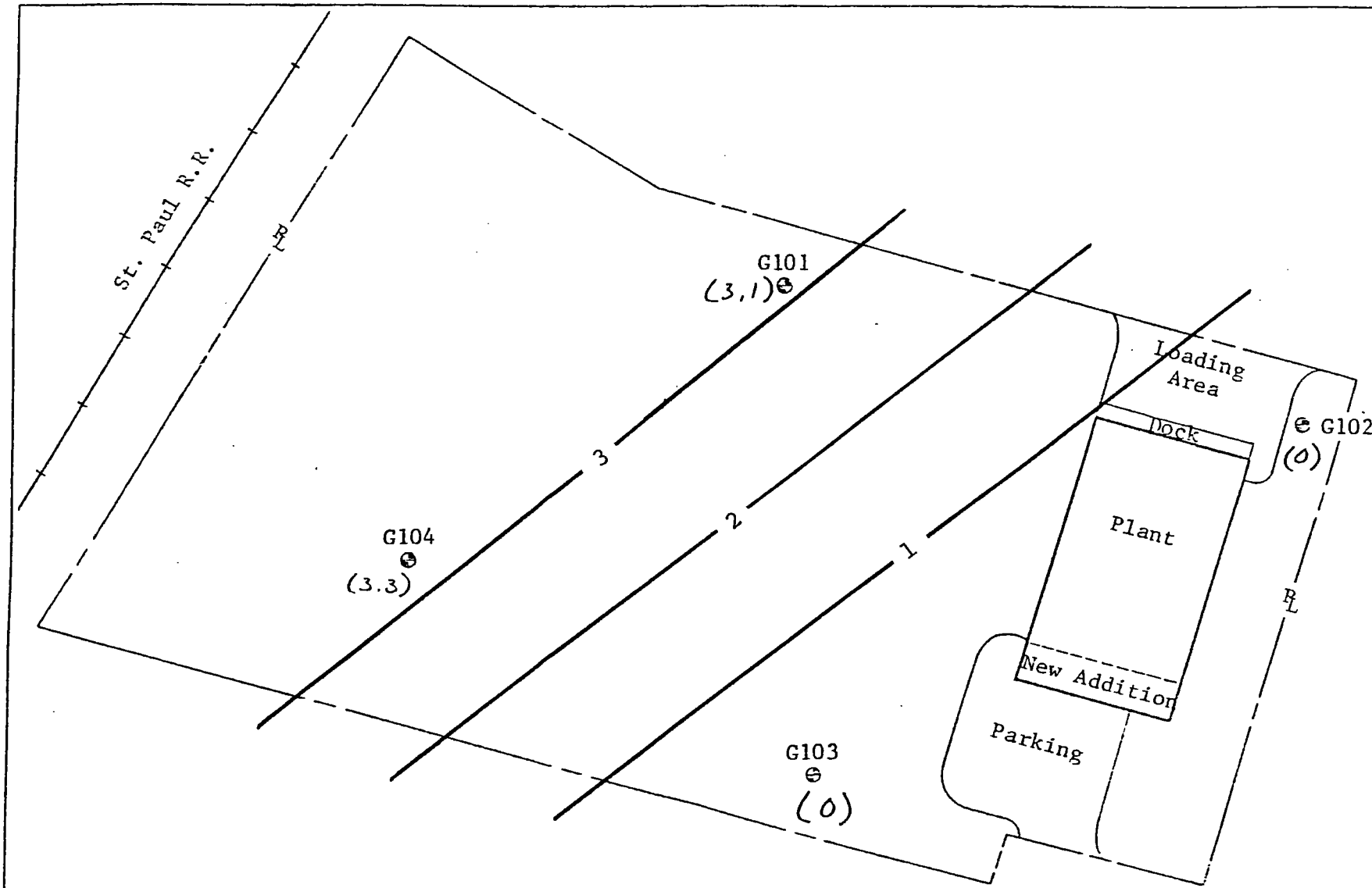
HANSON EQUIPMENT
C-1,2- Dichloroethylene (PPb)
Scale: 1"=100'



HANSON EQUIPMENT
1,1- Dichloroethane (PPb)
Scale: 1"=100'



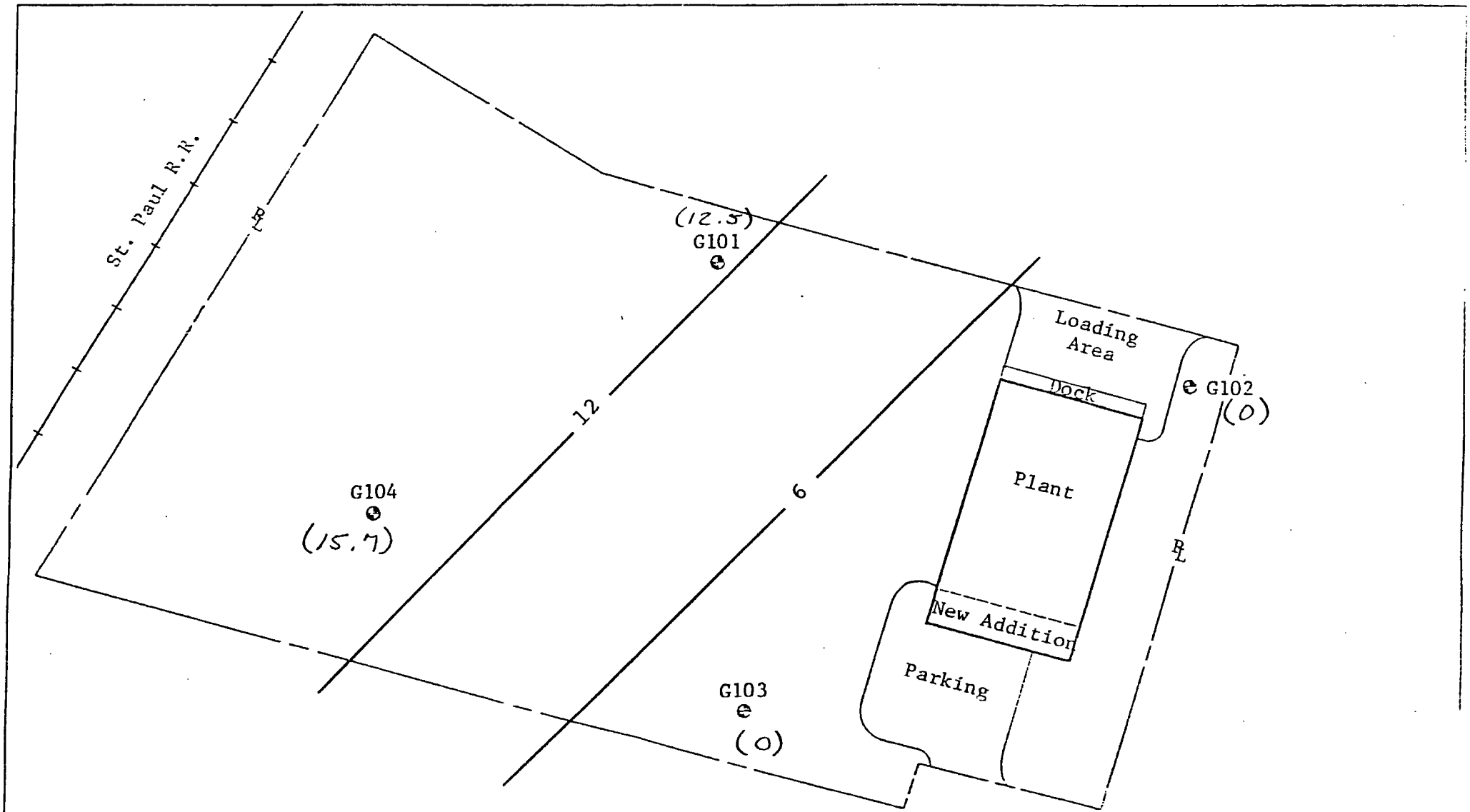
HANSON EQUIPMENT
1,1,1- Trichloroethane (PPb)
Scale: 1"=100'



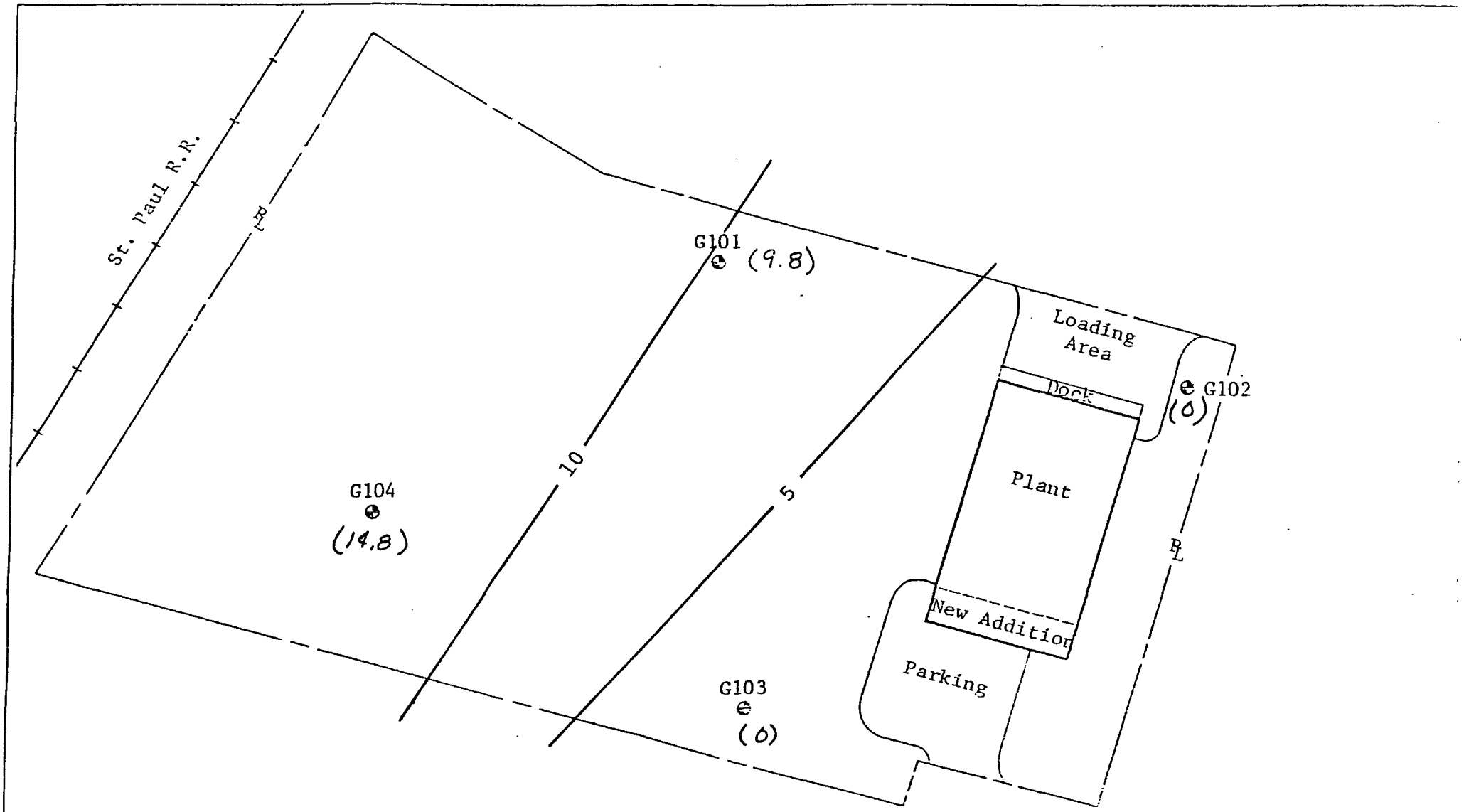
HANSON EQUIPMENT

Trichloroethylene
(PPb)

Scale: 1"=100'



HANSON EQUIPMENT
1,1- Dichloroethylene (PPb)
Scale: 1"=100'



HANSON EQUIPMENT
1,1- Dichloroethane (PPb)
Scale: 1"=100'

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47360

SAMPLE DESCRIPTION: G101
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1640

Date Received: 06-16-87 103(

Chloride	96.	mg/L
Solids, Dissolved	352.	mg/L
Sulfate	30.	mg/L
Total Organic Carbon (TOC)	63.2	mg/L
Total Organic Halogens	0.028	mg/L
Arsenic	<0.001	mg/L
Barium	0.02	mg/L
Cadmium	0.004	mg/L
Chromium, Total	0.009	mg/L
Lead	<0.01	mg/L
Mercury	<0.0001	mg/L
Selenium	<0.001	mg/L
Silver	0.001	mg/L

All inorganic results on filtered sample.

T Gardner

Toni Gartner, Manager
Rockford Division

Austin Division	Bartlett Division	Rosner/Runyon Division	Rockford Division	Corporate Office
2621-130 Ridgepoint Dr. Austin TX 78754 512-928-8905	850 West Bartlett Rd. Bartlett IL 60103 312-289-3100	222 South Morgan St. Chicago IL 60607 312-666-4469	3548 35th St. Rockford IL 61109 815-874-2171	850 West Bartlett Rd. Bartlett IL 60103 312-289-3100

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47360

SAMPLE DESCRIPTION: G101
Hanson Products, South Beloit, IL

Date Taken: 06-15-87 1640

Date Received: 06-16-87 103

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	9.8	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	12.5	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	1.5	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L

All inorganic results on filtered sample.

Toni Gartner, Manager
Rockford Division

Austin Division	Bartlett Division	Rosner/Runyon Division	Rockford Division	Corporate Office
2621-130 Ridgepoint Dr. Austin TX 78754 512-928-8905	850 West Bartlett Rd. Bartlett IL 60103 312-289-3100	222 South Morgan St. Chicago IL 60607 312-666-4469	3548 35th St. Rockford IL 61109 815-874-2171	850 West Bartlett Rd Bartlett IL 60103 312-289-3100

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47360

SAMPLE DESCRIPTION: G101
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1640 Date Received: 06-16-87 103

VOLATILE COMPOUNDS

Methyl ethyl ketone	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	5.8	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	127.	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	3.1	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

All inorganic results on filtered sample.

T Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47360

SAMPLE DESCRIPTION: G101
Hanson Products, South Beloit, IL

Date Taken: 06-15-87 1640

Date Received: 06-16-87 103(

BASE/NEUTRAL COMPOUNDS

Acenaphthene	<10.	ug/L
Acenaphthylene	<10.	ug/L
Anthracene	<10.	ug/L
Benzidine	<50.	ug/L
Benzo(a)anthracene	<10.	ug/L
Benzo(b)fluoranthene	<10.	ug/L
Benzo(k)fluoranthene	<10.	ug/L
Benzo(a)pyrene	<10.	ug/L
Benzo(ghi)perylene	<10.	ug/L
Benzyl butyl phthalate	<10.	ug/L
Bis(2-chloroethyl)ether	<10.	ug/L
Bis(2-chloroethoxy)methane	<10.	ug/L
Bis(2-ethylhexyl)phthalate	<10.	ug/L
Bis(2chloroisopropyl)ether	<10.	ug/L
4-Bromophenyl phenyl ether	<10.	ug/L
2-Chloronaphthalene	<10.	ug/L
4-Chlorophenylphenyl ether	<10.	ug/L
Chrysene	<10.	ug/L
Dibenzo(a,h)anthracene	<10.	ug/L
Di-n-butylphthalate	<10.	ug/L
1,3-Dichlorobenzene	<10.	ug/L
1,2-Dichlorobenzene	<10.	ug/L
1,4-Dichlorobenzene	<10.	ug/L
3,3-Dichlorobenzidine	<20.	ug/L
Diethyl phthalate	<10.	ug/L

All inorganic results on filtered sample.

T Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47360

SAMPLE DESCRIPTION: G101
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1640 Date Received: 06-16-87 103

BASE/NEUTRAL COMPOUNDS

Dimethyl phthalate	<10.	ug/L
2,4-Dinitrotoluene	<10.	ug/L
2,6-Dinitrotoluene	<10.	ug/L
Di-n-octylphthalate	<10.	ug/L
Fluoranthene	<10.	ug/L
Fluorene	<10.	ug/L
Hexachlorobenzene	<10.	ug/L
Hexachlorobutadiene	<10.	ug/L
Hexachlorocyclopentadiene	<25.	ug/L
Hexachloroethane	<10.	ug/L
Indeno(1,2,3-cd)pyrene	<10.	ug/L
Isophorone	<10.	ug/L
Naphthalene	<10.	ug/L
Nitrobenzene	<10.	ug/L
N-Nitrosodimethylamine	<10.	ug/L
N-Nitrosodiphenylamine	<10.	ug/L
N-Nitrosodi-n-propylamine	<10.	ug/L
Phenanthrene	<10.	ug/L
Pyrene	<10.	ug/L
1,2,4-Trichlorobenzene	<10.	ug/L

All inorganic results on filtered sample.

T. Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47360

SAMPLE DESCRIPTION: G101
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1640 Date Received: 06-16-87 10

ACID COMPOUNDS

4-Chloro-3-methylphenol	<10.	ug/L
2-chlorophenol	<10.	ug/L
2,4-Dichlorophenol	<10.	ug/L
2,4-Dimethylphenol	<10.	ug/L
2,4-Dinitrophenol	<50.	ug/L
2-Methyl-4,6-dinitrophenol	<50.	ug/L
2-Nitrophenol	<10.	ug/L
4-Nitrophenol	<50.	ug/L
Pentachlorophenol	<50.	ug/L
Phenol	<10.	ug/L
2,4,6-Trichlorophenol	<10.	ug/L

Note: Metals results on filtered sample.

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47361

SAMPLE DESCRIPTION: G102
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1705

Date Received: 06-16-87 103

Chloride	112.	mg/L
Solids, Dissolved	480.	mg/L
Sulfate	38.	mg/L
Total Organic Carbon (TOC)	67.8	mg/L
Total Organic Halogens	<0.02	mg/L
Arsenic	<0.001	mg/L
Barium	0.03	mg/L
Cadmium	0.004	mg/L
Chromium, Total	0.011	mg/L
Lead	<0.01	mg/L
Mercury	<0.0001	mg/L
Selenium	<0.001	mg/L
Silver	0.001	mg/L

Note: Metals results on filtered sample.

L Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47361

SAMPLE DESCRIPTION: G102
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1705 Date Received: 06-16-87 10

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L

Note: Metals results on filtered sample.

T. Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47361

SAMPLE DESCRIPTION: G102
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1705 Date Received: 06-16-87 103

VOLATILE COMPOUNDS

Methyl ethyl ketone	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Note: Metals results on filtered sample.

T. Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47361

SAMPLE DESCRIPTION: G102
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1705 Date Received: 06-16-87 10

BASE/NEUTRAL COMPOUNDS

Acenaphthene	<10.	ug/L
Acenaphthylene	<10.	ug/L
Anthracene	<10.	ug/L
Benzidine	<50.	ug/L
Benzo(a)anthracene	<10.	ug/L
Benzo(b)fluoranthene	<10.	ug/L
Benzo(k)fluoranthene	<10.	ug/L
Benzo(a)pyrene	<10.	ug/L
Benzo(ghi)perylene	<10.	ug/L
Benzyl butyl phthalate	<10.	ug/L
Bis(2-chloroethyl)ether	<10.	ug/L
Bis(2-chloroethoxy)methane	<10.	ug/L
Bis(2-ethylhexyl)phthalate	<10.	ug/L
Bis(2chloroisopropyl)ether	<10.	ug/L
4-Bromophenyl phenyl ether	<10.	ug/L
2-Chloronaphthalene	<10.	ug/L
4-Chlorophenylphenyl ether	<10.	ug/L
Chrysene	<10.	ug/L
Dibenzo(a,h)anthracene	<10.	ug/L
Di-n-butylphthalate	<10.	ug/L
1,3-Dichlorobenzene	<10.	ug/L
1,2-Dichlorobenzene	<10.	ug/L
1,4-Dichlorobenzene	<10.	ug/L
3,3-Dichlorobenzidine	<20.	ug/L
Diethyl phthalate	<10.	ug/L

Note: Metals results on filtered sample.

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47361

SAMPLE DESCRIPTION: G102
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1705 Date Received: 06-16-87 103

BASE/NEUTRAL COMPOUNDS

Dimethyl phthalate	<10.	ug/L
2,4-Dinitrotoluene	<10.	ug/L
2,6-Dinitrotoluene	<10.	ug/L
Di-n-octylphthalate	<10.	ug/L
Fluoranthene	<10.	ug/L
Fluorene	<10.	ug/L
Hexachlorobenzene	<10.	ug/L
Hexachlorobutadiene	<10.	ug/L
Hexachlorocyclopentadiene	<25.	ug/L
Hexachloroethane	<10.	ug/L
Indeno(1,2,3-cd)pyrene	<10.	ug/L
Isophorone	<10.	ug/L
Naphthalene	<10.	ug/L
Nitrobenzene	<10.	ug/L
N-Nitrosodimethylamine	<10.	ug/L
N-Nitrosodiphenylamine	<10.	ug/L
N-Nitrosodi-n-propylamine	<10.	ug/L
Phenanthrene	<10.	ug/L
Pyrene	<10.	ug/L
1,2,4-Trichlorobenzene	<10.	ug/L

Note: Metals results on filtered sample.

T Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47361

SAMPLE DESCRIPTION: G102
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1705 Date Received: 06-16-87 1030

ACID COMPOUNDS

4-Chloro-3-methylphenol	<10.	ug/L
2-chlorophenol	<10.	ug/L
2,4-Dichlorophenol	<10.	ug/L
2,4-Dimethylphenol	<10.	ug/L
2,4-Dinitrophenol	<50.	ug/L
2-Methyl-4,6-dinitrophenol	<50.	ug/L
2-Nitrophenol	<10.	ug/L
4-Nitrophenol	<50.	ug/L
Pentachlorophenol	<50.	ug/L
Phenol	<10.	ug/L
2,4,6-Trichlorophenol	<10.	ug/L

Note: Metals results on filtered sample.

T Gartner

Toni Gartner, Manager
Rockford Division

Austin Division
2621-130 Ridgepoint Dr.
Austin TX 78754
512-928-8905

Bartlett Division
850 West Bartlett Rd.
Bartlett IL 60103
312-289-3100

Rosner/Runyon Division
222 South Morgan St.
Chicago IL 60607
312-666-4469

Rockford Division
3548 35th St.
Rockford IL 61109
815-874-2171

Corporate Office
850 West Bartlett Rd.
Bartlett IL 60103
312-289-3100

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47362

SAMPLE DESCRIPTION: G103
Hanson Products, South Beloit, IL

Date Taken: 06-16-87 0930

Date Received: 06-16-87 10:

Chloride	82.	mg/L
Solids, Dissolved	428.	mg/L
Sulfate	26.	mg/L
Total Organic Carbon (TOC)	61.6	mg/L
Total Organic Halogens	<0.02	mg/L
Arsenic	<0.001	mg/L
Barium	<0.01	mg/L
Cadmium	0.002	mg/L
Chromium, Total	0.005	mg/L
Lead	0.01	mg/L
Mercury	<0.0001	mg/L
Selenium	<0.001	mg/L
Silver	0.001	mg/L

Note: Metals results on filtered sample.

Toni Gartner, Manager
Rockford Division

Austin Division	Bartlett Division	Rosner/Runyon Division	Rockford Division	Corporate Office
2621-130 Ridgepoint Dr. Austin TX 78754 512-928-8905	850 West Bartlett Rd. Bartlett IL 60103 312-289-3100	222 South Morgan St. Chicago IL 60607 312-666-4469	3548 35th St. Rockford IL 61109 815-874-2171	850 West Bartlett Rd Bartlett IL 60103 312-289-3100

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47362

SAMPLE DESCRIPTION: G103
Hanson Products, South Beloit, IL
Date Taken: 06-16-87 0930 Date Received: 06-16-87 103

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L

Note: Metals results on filtered sample.

T. Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47362

SAMPLE DESCRIPTION: G103
Hanson Products, South Beloit, IL
Date Taken: 06-16-87 0930 Date Received: 06-16-87 103

BASE/NEUTRAL COMPOUNDS

Acenaphthene	<10.	ug/L
Acenaphthylene	<10.	ug/L
Anthracene	<10.	ug/L
Benzidine	<50.	ug/L
Benzo(a)anthracene	<10.	ug/L
Benzo(b)fluoranthene	<10.	ug/L
Benzo(k)fluoranthene	<10.	ug/L
Benzo(a)pyrene	<10.	ug/L
Benzo(ghi)perylene	<10.	ug/L
Benzyl butyl phthalate	<10.	ug/L
Bis(2-chloroethyl)ether	<10.	ug/L
Bis(2-chloroethoxy)methane	<10.	ug/L
Bis(2-ethylhexyl)phthalate	<10.	ug/L
Bis(2chloroisopropyl)ether	<10.	ug/L
4-Bromophenyl phenyl ether	<10.	ug/L
2-Chloronaphthalene	<10.	ug/L
4-Chlorophenylphenyl ether	<10.	ug/L
Chrysene	<10.	ug/L
Dibenzo(a,h)anthracene	<10.	ug/L
Di-n-butylphthalate	<10.	ug/L
1,3-Dichlorobenzene	<10.	ug/L
1,2-Dichlorobenzene	<10.	ug/L
1,4-Dichlorobenzene	<10.	ug/L
3,3-Dichlorobenzidine	<20.	ug/L
Diethyl phthalate	<10.	ug/L

Note: Metals results on filtered sample.

L Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47362

SAMPLE DESCRIPTION: G103
Hanson Products, South Beloit, IL
Date Taken: 06-16-87 0930 Date Received: 06-16-87 10

VOLATILE COMPOUNDS

Methyl ethyl ketone	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Note: Metals results on filtered sample.

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47362

SAMPLE DESCRIPTION: G103
Hanson Products, South Beloit, IL
Date Taken: 06-16-87 0930 Date Received: 06-16-87 103

BASE/NEUTRAL COMPOUNDS

Dimethyl phthalate	<10.	ug/L
2,4-Dinitrotoluene	<10.	ug/L
2,6-Dinitrotoluene	<10.	ug/L
Di-n-octylphthalate	<10.	ug/L
Fluoranthene	<10.	ug/L
Fluorene	<10.	ug/L
Hexachlorobenzene	<10.	ug/L
Hexachlorobutadiene	<10.	ug/L
Hexachlorocyclopentadiene	<25.	ug/L
Hexachloroethane	<10.	ug/L
Indeno(1,2,3-cd)pyrene	<10.	ug/L
Isophorone	<10.	ug/L
Naphthalene	<10.	ug/L
Nitrobenzene	<10.	ug/L
N-Nitrosodimethylamine	<10.	ug/L
N-Nitrosodiphenylamine	<10.	ug/L
N-Nitrosodi-n-propylamine	<10.	ug/L
Phenanthrene	<10.	ug/L
Pyrene	<10.	ug/L
1,2,4-Trichlorobenzene	<10.	ug/L

Note: Metals results on filtered sample.

Toni Gartner, Manager
Rockford Division

Austin Division	Bartlett Division	Rosner/Runyon Division	Rockford Division	Corporate Office
2621-130 Ridgepoint Dr. Austin TX 78754 512-928-8905	850 West Bartlett Rd. Bartlett IL 60103 312-289-3100	222 South Morgan St. Chicago IL 60607 312-666-4469	3548 35th St. Rockford IL 61109 815-874-2171	850 West Bartlett Rd. Bartlett IL 60103 312-289-3100

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47362

SAMPLE DESCRIPTION: G103
Hanson Products, South Beloit, IL
Date Taken: 06-16-87 0930 Date Received: 06-16-87 1030

ACID COMPOUNDS

4-Chloro-3-methylphenol	<10.	ug/L
2-chlorophenol	<10.	ug/L
2,4-Dichlorophenol	<10.	ug/L
2,4-Dimethylphenol	<10.	ug/L
2,4-Dinitrophenol	<50.	ug/L
2-Methyl-4,6-dinitrophenol	<50.	ug/L
2-Nitrophenol	<10.	ug/L
4-Nitrophenol	<50.	ug/L
Pentachlorophenol	<50.	ug/L
Phenol	<10.	ug/L
2,4,6-Trichlorophenol	<10.	ug/L

Note: Metals results on filtered sample.

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47363

SAMPLE DESCRIPTION: G104
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1745 Date Received: 06-16-87 10

Chloride	106.	mg/L
Solids, Dissolved	404.	mg/L
Sulfate	21.	mg/L
Total Organic Carbon (TOC)	65.8	mg/L
Total Organic Halogens	0.049	mg/L
Arsenic	<0.001	mg/L
Barium	<0.01	mg/L
Cadmium	<0.001	mg/L
Chromium, Total	<0.001	mg/L
Lead	0.04	mg/L
Mercury	<0.0001	mg/L
Selenium	<0.001	mg/L
Silver	<0.001	mg/L

Note: Metals results on filtered sample.

T Gartner

Toni Gartner, Manager
Rockford Division

Austin Division	Bartlett Division	Rosner/Runyon Division	Rockford Division	Corporate Office
2621-130 Ridgepoint Dr. Austin TX 78754 512-928-8905	850 West Bartlett Rd. Bartlett IL 60103 312-289-3100	222 South Morgan St. Chicago IL 60607 312-666-4469	3548 35th St. Rockford IL 61109 815-874-2171	850 West Bartlett Rd Bartlett IL 601[illegible] 312-289-31[illegible]

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47363

SAMPLE DESCRIPTION: G104
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1745 Date Received: 06-16-87 103

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	14.8	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	15.7	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	2.2	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L

Note: Metals results on filtered sample.

T Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47363

SAMPLE DESCRIPTION: G104
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1745 Date Received: 06-16-87 10:

VOLATILE COMPOUNDS

Methyl ethyl ketone	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	4.8	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	127.	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	3.3	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Note: Metals results on filtered sample.

T. Gartner

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47363

SAMPLE DESCRIPTION: G104
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1745 Date Received: 06-16-87 103

BASE/NEUTRAL COMPOUNDS

Acenaphthene	<10.	ug/L
Acenaphthylene	<10.	ug/L
Anthracene	<10.	ug/L
Benzidine	<50.	ug/L
Benzo(a)anthracene	<10.	ug/L
Benzo(b)fluoranthene	<10.	ug/L
Benzo(k)fluoranthene	<10.	ug/L
Benzo(a)pyrene	<10.	ug/L
Benzo(ghi)perylene	<10.	ug/L
Benzyl butyl phthalate	<10.	ug/L
Bis(2-chloroethyl)ether	<10.	ug/L
Bis(2-chloroethoxy)methane	<10.	ug/L
Bis(2-ethylhexyl)phthalate	21.	ug/L
Bis(2chloroisopropyl)ether	<10.	ug/L
4-Bromophenyl phenyl ether	<10.	ug/L
2-Chloronaphthalene	<10.	ug/L
4-Chlorophenylphenyl ether	<10.	ug/L
Chrysene	<10.	ug/L
Dibenzo(a,h)anthracene	<10.	ug/L
Di-n-butylphthalate	<10.	ug/L
1,3-Dichlorobenzene	<10.	ug/L
1,2-Dichlorobenzene	<10.	ug/L
1,4-Dichlorobenzene	<10.	ug/L
3,3-Dichlorobenzidine	<20.	ug/L
Diethyl phthalate	<10.	ug/L

Note: Metals results on filtered sample.

Toni Gartner, Manager
Rockford Division

aqualab inc.

ANALYTICAL REPORT

Mr. Mike Rogers
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

07-01-87

Sample No: 47363

SAMPLE DESCRIPTION: G104
Hanson Products, South Beloit, IL
Date Taken: 06-15-87 1745 Date Received: 06-16-87 103

BASE/NEUTRAL COMPOUNDS

Dimethyl phthalate	<10.	ug/L
2,4-Dinitrotoluene	<10.	ug/L
2,6-Dinitrotoluene	<10.	ug/L
Di-n-octylphthalate	<10.	ug/L
Fluoranthene	<10.	ug/L
Fluorene	<10.	ug/L
Hexachlorobenzene	<10.	ug/L
Hexachlorobutadiene	<10.	ug/L
Hexachlorocyclopentadiene	<25.	ug/L
Hexachloroethane	<10.	ug/L
Indeno(1,2,3-cd)pyrene	<10.	ug/L
Isophorone	<10.	ug/L
Naphthalene	<10.	ug/L
Nitrobenzene	<10.	ug/L
N-Nitrosodimethylamine	<10.	ug/L
N-Nitrosodiphenylamine	<10.	ug/L
N-Nitrosodi-n-propylamine	<10.	ug/L
Phenanthrene	<10.	ug/L
Pyrene	<10.	ug/L
1,2,4-Trichlorobenzene	<10.	ug/L

Note: Metals results on filtered sample.

Toni Gartner, Manager
Rockford Division

APPENDIX H

1990 WARZYN REPORT

WARZYN

Report
15275

Site Investigation
North American Tool Corporation
South Beloit, Illinois

Prepared for:
North American Tool Corporation
South Beloit, Illinois

Prepared by:
Warzyn Engineering Inc.
Madison, Wisconsin

November 1990

WARZYN

November 13, 1990

Mr. Roger Taylor
North American Tool Corporation
215 Elmwood Avenue
P.O. Box 116
South Beloit, Illinois 61080

Re: Site Investigation Report

Dear Mr. Taylor:

Attached is the Site Investigation Report for the North American Tool Corporation (NATCo) property (site) located on Elmwood Avenue in South Beloit, Illinois. The report is provided for your review prior to submittal to the Illinois Environmental Protection Agency (IEPA). The report includes a summary of the work performed and the results of the investigation.

General conclusions of the investigation are as follows:

- Soil contamination appears limited to relatively small areas immediately west and north of the existing building. The majority of contaminated soil in the west area has been excavated and stockpiled on-site.

- Volatile organic compounds (VOCs) in groundwater have been observed in three monitoring wells sampled before the excavation, and beneath the excavation. Proposed Title 35 groundwater level criteria for 1,1-dichloroethene and 1,1,1-trichloroethane have been exceeded in the excavation groundwater sample, but not in the monitoring wells.

Based on the results, we recommend the following additional work to address the remaining concerns at the site:

- Water level data from the site monitoring wells indicate the water table at the site is relatively flat. Groundwater flow direction should be further evaluated by additional measurements. Installation of additional wells should be considered to further define the water table.

- Site monitoring wells should be sampled periodically to monitor for water quality changes or possible groundwater quality criteria exceedances.

- Locations of nearby private water supply wells or municipal wells should be determined, and the potential need for sampling these wells should be assessed.

THE PERFECT BALANCE
BETWEEN TECHNOLOGY
AND CREATIVITY

MADISON
ONE SCIENCE COURT
P.O. BOX 5555
MADISON, WI 53705

- Additional investigation of the area north of the existing building where high soil gas readings were observed is recommended. Shallow soil borings and soil/groundwater sampling could be used in this area to determine the extent of potential contamination.

- Contaminated soils stockpiled on the property should be disposed of properly. This would involve testing of the soils using Toxicity Characteristic Leaching Procedure (TCLP) methods to evaluate disposal options. Discussions with waste disposal companies may be necessary to determine if the soils will be accepted as non-hazardous waste, or will require treatment as hazardous waste.

- A meeting with IEPA to discuss the results of the investigation and the proposed recommendations for additional work should be conducted prior to initiating further work.

The generalized scope of the follow-up investigation (Phase 2) would include completion of five soil borings. Three borings would be located in the vicinity of soil gas sampling location SG9, SG10, and north of the loading dock to investigate the north area of the existing building. If VOCs are detected north of the building, these borings may be instrumented with monitoring wells. Two soil borings would be instrumented with monitoring wells south of soil boring SG1 and west of soil boring SG2 to monitor groundwater near the excavation area.

Soil and groundwater samples would be obtained from each boring. Soil sample depths would be based on qualitative results of photoionization detector (PID) screening of soil samples collected during drilling. Selected soil samples would be analyzed for VOCs and lead. Groundwater samples would be analyzed for VOCs.

After reviewing your comments on the draft report, we will finalize the report for submittal to the IEPA for review. We would like to meet with you to discuss the results of the investigation prior to meeting with IEPA. The meeting with IEPA will be primarily to reach an agreement on the course of action that needs to be taken at the site.

Please call if you have questions or comments regarding the report or the recommendations.

Sincerely,

WARZYN ENGINEERING INC.

Richard K. Hosfeld

Richard K. Hosfeld, CPG
Project Manager

PFJ/vlr/KJQ/DWH
[wpmisc-110a-76]
15275.00-MD

Enclosure: Site Investigation Report

Site Investigation
North American Tool Corporation
South Beloit, Illinois

November 1990

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

PFJ/vlr/
[jkk-600-38z]
15275.00

SITE INVESTIGATION
NORTH AMERICAN TOOL CORPORATION

INTRODUCTION

This report summarizes the site investigation performed by Warzyn Engineering Inc. (Warzyn) for North American Tool Corporation (NATCo). The site is located in the S.E. 1/4 of Sec. 6, T46N, R2E, City of South Beloit, Winnebago County, Illinois. A machine shop was operated at the site for approximately 26 years by the previous owner(s). The site was purchased by Magnetic Data Carriers Corporation from Hanson General Products during a bankruptcy sale in April 1986 but was never occupied. NATCo acquired the site in November 1986. Four monitoring wells were installed for the bankruptcy trustees by Rapp and Associates of Springfield, Illinois, and sampled in December 1987. Results indicated tetrachloroethene (PCE) was present in the groundwater at concentrations ranging from 1.4 to 5.8 ug/L. Three wells remain on the site property. One well reportedly was destroyed when a portion of the property was transferred to Trenwyth Industries Midwest Inc. (date unknown). Recently, NATCo began construction of a building addition located west of the existing building.

The objectives of the site investigation were to examine the extent and magnitude of contamination at the site, and provide recommendations for additional work or other response actions to address the site contamination.

WORK PERFORMED

The site investigation generally followed the approach outlined in Warzyn's August 20, 1990 site investigation proposal. The basic approach was outlined to the Illinois Environmental Protection Agency (IEPA) during an August 27, 1990 meeting with NATCo, and the IEPA offered no objection to proceeding with the investigation. The site investigation consisted of the following tasks:

- soil gas survey;
- groundwater and soil sampling;
- location and elevation survey of existing wells;
- excavation of contaminated soils; and
- installation of passive vapor venting system.

Based on initial soil gas survey results, proposed soil borings were not performed due to the limited area of potential contamination. Rather, soil from the contaminated area was excavated and stockpiled at the site.

SOIL GAS SURVEY

Fourteen soil gas samples were collected in the vicinity of the existing building and the building addition on August 29, 1990 to identify potential areas of volatile organic compound (VOC) contamination. Sampling locations are shown on Drawing 15275-B1. Soil gas sampling results are presented in Appendix A and summarized in Table 1.

Soil gas samples were obtained by driving a rod into the soil to a depth of 3 ft, withdrawing the rod, inserting a sample probe into the hole, and sealing the probe at the ground surface. An air pump was used to draw soil gas through the probe and into a sample vial attached in series between the probe and the pump. The system was purged for approximately 2 minutes prior to obtaining a sample. Following collection, a photoionization detector (HNU meter) was used to screen samples for the presence of VOCs and to help direct the survey. If positive readings were observed, the system was purged with ambient air for one minute prior to sampling the next location. Sample vials were wrapped in foil and stored in the dark on ice until delivered to Warzyn's Analytical Laboratory. The samples were analyzed for 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (1,2-DCE), trichloroethene (TCE), and tetrachloroethene (PCE) (refer to Appendix A).

GROUNDWATER AND SOIL SAMPLING

On August 30, 1990, the three existing monitoring wells were redeveloped and sampled for VOC analysis. Water levels were measured on August 30 and again on October 30, 1990. A soil sample collected from a depth of 1-1.5 ft from soil gas sampling location SG03 was also obtained for VOC analysis. Analytical results are presented in Appendix A and summarized in Tables 2 and 3. Soil borings were not performed as originally proposed, because results of the soil gas survey were considered sufficient to outline the areas of contamination.

Monitoring wells MW1, MW2 and MW3 were redeveloped on August 30, 1990 by purging 60 gallons of water from each well using a B-K piston pump, while monitoring pH and specific conductance during purging. Stabilization of pH and specific conductance readings was used to evaluate whether sufficient water volume had been withdrawn from the wells. The objective of development was to remove sediment and water which may not be representative of the groundwater from the well prior to sampling. Refer to Table 4 for monitoring well information. Water level and total depth measurements were performed and groundwater samples were then obtained from each well. A field blank, trip blank, and duplicate sample of Well MW3 were also obtained for quality control. A soil sample was obtained from soil gas location SG03 at a depth of 1 to 1.5 ft using a core sampler. All samples were delivered to Warzyn's analytical laboratory for VOC analysis.

LOCATION AND ELEVATION SURVEY

Locations, and elevations of ground surface and the top of well casing for wells MW1, MW2, and MW3, were surveyed by R.H. Batterman and Company, Inc. on September 28, 1990. Elevations were measured to the nearest 0.01 ft. Locations were measured to the nearest 0.1 ft. These data were used in conjunction with the water level data to provide groundwater elevations (Refer to Table 4).

EXCAVATION OF CONTAMINATED SOILS

Excavation of the contaminated soils on the west side of the existing building was performed on September 10, 1990 by Selvog Excavating Inc., with oversight and monitoring by Warzyn. The excavation was centered around soil gas location SG03. The excavation was approximately 43 ft by 18 ft by 5 ft deep (Drawing 15275-B1).

The excavation was performed using a backhoe. Topsoil was removed to a depth of approximately 1 ft. As the soils were removed, the soil in each backhoe bucket was screened with an HNu PID (11.7 eV). Clean material (no readings above background) was segregated from contaminated soil (readings above background). Contaminated soil was stockpiled on plastic.

HNu readings were also used to determine the lateral limits of the excavation (Drawing 15275-B1). The soils exhibited readings of 40-50 ppm near soil gas location SG03, with slight or no readings above background at the excavation boundaries. At a depth of 5 ft, soils from the excavation floor continued to have HNu readings up to 100-160 ppm. Analytical samples were collected at each of the four corners of the excavation. A composite sample of the excavated contaminated soil was also collected for analysis. A hole approximately 6-ft by 6-ft was also excavated in the vicinity of soil gas location SG03 to a depth of approximately 7 ft. Groundwater rose in the excavation to 6.5 ft below ground surface. A water sample was collected and preserved with 1:1 HCl. Samples were analyzed for VOCs at Warzyn's analytical laboratory.

VAPOR VENTING SYSTEM

A passive vapor venting system was installed beneath the building expansion. The system consists of a perforated PVC pipe surrounded by a granular filter, which runs through the excavated area and is vented to the building exterior. The purpose of the system is to control any potential migration of contaminated soil gas into the building addition. The system was conceptually outlined by Warzyn and reportedly installed by the building contractor who constructed the building addition. No engineering plans were prepared for this system.

RESULTS

GEOLOGY AND HYDROGEOLOGY

Soils in the vicinity of SG03 observed during the excavation consisted of topsoil, underlain by black silt with little fine sand (ML, United Soil Classification System) from a depth of 1 to 5 ft. Gray sandy clay (CL) is present from 5 to 6 ft below ground surface with light brown gravelly sand (SP-GP) present to at least 7 ft below ground surface. Regional information indicates that alluvium or windblown sand deposits underlain by sand and gravel associated with the Rock River are present in the area (Berg, et. al. 1984). Boring logs for the site wells are not available.

Water level data collected on August 30 and October 30, 1990 indicates that the water table is within approximately 2 to 5 ft of the ground surface. The monitoring wells are approximately 20 to 21 ft deep (from ground surface), but other construction details or boring logs are not available. Based on the soils observed during excavation, the water table is probably within the upper sandy clay or the underlying gravelly sand. The water table is relatively flat (Drawing 15275-B1) with a gradient of 0.0005 and flow to the southwest. Due to the minimum of wells to determine groundwater flow direction, this estimate of flow direction and gradient should be considered preliminary. The locations of private or municipal water supply wells downgradient of the site have not been determined at this time.

ANALYTICAL RESULTS

Soils

Analytical results of the soil gas samples indicate the presence of two distinct zones of contamination west of the existing building (i.e., sample points SG03 and SG04) and north of the building (SG09 and SG10) (See Drawing 15275-B1 and Table 1). The sample at SG03 had the highest concentration of total VOCs, although SG09 and SG10 had similar concentrations of tetrachloroethene and trichloroethene (SG10, only). VOCs were not detected at the other 10 locations.

Analytical results of the soil samples from soil gas location SG03 (SB03), the four corners of the excavation, and the composite sample of excavated soils are summarized in Table 3. Soil Sample SB03 contained 1,1,1-trichloroethane (TCA) and trichloroethene (TCE) at 422 ug/kg and 214 ug/kg, respectively, with PCE at or below the quantitation limit of 50 ug/kg (Table 3).

The only quantifiable detects in the corner samples were TCA and TCE. TCA was present in three of four corner samples, at concentrations approximately 10 times less than concentrations present in the excavated soil composite sample (TCA; 1570 ug/kg).

The primary organic compounds detected in the excavated soil composite sample were total xylenes at a concentration of 14,600 ug/kg. Total xylenes also were detected in the northeast corner sample at a concentration below the method quantitation limit of 50 ug/l. Ethylbenzene and 1,2-dichlorobenzene and were only observed in the excavated soil composite sample at concentrations of 806 ug/kg and 1450 ug/kg, respectively. The excavation sample was also analyzed for total lead and RCRA characteristics (flashpoint, paint filter test, pH, and total solids). Lead was observed at 46.0 mg/kg. The flashpoint was greater than 200° F, the paint filter test indicated 0% free liquids, the pH was 6.87 S.U., and the total solids were 86.1%.

Groundwater

VOCs were detected in each of the three wells, with largest number of individual contaminants observed at well MW-2. However, none of the concentrations exceed the groundwater quality criteria specified in the recently proposed Title 35, Section 620.301 of the Illinois Administrative Code (Title 35)(Table 2). Tetrachloroethene (PCE), the compound of concern based on previous 1987 sampling, was detected at similar concentrations at each of the three wells (1.10 ug/L to 2.2 ug/L).

The groundwater sample from the excavation in vicinity of soil gas location SG03 had concentrations of 9150 ug/L TCA and 1180 ug/L of 1,1-DCE. These concentrations exceed the proposed Title 35 groundwater quality criteria for these compounds.

None of the three wells are known to be directly downgradient of the excavation area, based on limited water level data. The distribution of VOCs in all three monitoring wells which surround the excavated area (Drawing 15275-B1) may be the result of changes in groundwater flow direction or gaseous diffusion in the unsaturated zone. Small changes in groundwater elevations could change the groundwater flow direction because the water table is relatively flat. Alternatively, volatile compounds could be transported via diffusion in the unsaturated soils, particularly if portions of the gravelly sand are unsaturated and overlain by a clayey sand which may limit release of VOCs to the atmosphere. Also, VOCs at well MW1 may be related to the localized occurrence of VOCs in the soil gas at soil gas sampling location SG10.

CONCLUSIONS

The site investigation succeeded in determining the extent and magnitude of soil contamination at the site, and provided the basis for excavation of the contaminated soil in the area west of the existing building. The following observations and conclusions are based on results of the site investigation.

- VOCs in soil appear limited to relatively small areas immediately west and north of the existing building based on the soil gas survey.

- Contaminated soil was excavated from the area west of the building to a depth of 5 ft, and stockpiled on-site. The excavation removed unsaturated soils with VOCs over 0.5 ppm, leaving soils with VOCs less than 0.5 ppm.

- VOCs in groundwater have been detected in wells MW1, MW2, and MW3, and beneath the excavation. Detected contaminants were chlorinated ethane and ethene compounds. Proposed Title 35 groundwater quality criteria were not exceeded at the existing site monitoring wells. A groundwater sample collected from the excavation did exceed the proposed Title 35 standards for 1,1,1-trichloroethane and 1,1-dichloroethene.

- The water table in the vicinity of the site is relatively flat based on available water level measurements. Groundwater flow is apparently toward the southwest. Changes in groundwater flow direction, or gaseous diffusion in the unsaturated zone, may account for the presence of VOCs in samples from the three monitoring wells surrounding the areas of potential VOC contamination.

REFERENCES

Berg, R.C. Kempton, J.P., and Stencyk, A.N. (1984) Geology for Planning in Boone and Winnebago Counties, Illinois Department of Energy and Natural Resources, State Geological Survey Division, Circular 531.

PFJ/vlr/KJQ/DWH
[jkk-600-38]
15275.00-MD

Appendix A

Analytical Results

TABLE 1

Soil Gas Survey Results
North American Tool Corporation
South Beloit, Illinois

Soil Gas Sampling Location	Field Screening With HNu ppm(1)	Laboratory Analytical Results	
		Compound(2)	Concentration (ug/L of soil gas)
SG01	ND	ND	-
SG02	ND	ND	-
SG03	11-15 (11-15)	1,1-Dichloroethene	119 (118)
		cis-1,2-Dichloroethene	514 (499)
		Trichloroethene	17.3 (20.9)
		Tetrachloroethene	15.0 (17.8)
SG04	ND	cis-1,2-Dichloroethene	1.04
SG05	ND	ND	-
SG06	ND	ND	-
SG07	0.5	ND	-
SG08	ND	ND	-
SG09	3.0	Trichloroethene	<1.00
		Tetrachloroethene	36.4
SG10	1.0	1,1-Dichloroethene	3.61
		cis-1,2-Dichloroethene	84.5
		Trichloroethene	18.0
		Tetrachloroethene	27.2
SG11	1.0	ND	-
SG12	0.8	ND	-
SG13	0.5	ND	-
SG14	NA	ND	-

NOTES:

ND = No Detects
NA = Not Analyzed
<1.00 indicates concentration below method quantation limit of 1.00 ug/L soil gas.

(1) ppm total volatile organics above background (reported as benzene equivalent)

(2) Sample chromatograms for soil gas samples SG03, SG04, SG09 and SG10 also contain unidentified compounds.

(3) Concentrations in parenthesis are from SG03 duplicate sample.

PFJ/vlr/APA/KJQ
[jlv-403-90]
15275.00-MD

TABLE 2

Groundwater Sampling Results Summary
North American Tool Corporation
South Beloit, Ilinois

Location	Compound	Concentration (ug/L)	Groundwater(3) Quality Criteria (ug/L)
MW1	Tetrachloroethene	1.18	5
MW2	1,1-Dichloroethane	16.5	-
	1,1-Dichloroethene	2.15	7
	cis-1,2-Dichloroethene	4.91	70
	Tetrachloroethene	1.10	5
	1,1,1-Trichloroethane	66.3	200
	Trichloroethene	3.28	5
MW3	Tetrachloroethene	2.23 (1.78)	5
	1,1,1-Trichloroethane	1.25 (1.14)	200
Excavation Ground-water	1,1-Dichloroethene	1180	7
	1,1,1-Trichloroethane	9150	200

NOTES:

1. Sampling performed on August 30, 1990.

2. ( ) concentrations indicate results of duplicate sample (MW3 Dup) analysis.

3. Groundwater quality criteria from Title 35, Section 620.301, Illinois Administrative Code. (same as maximum concentration levels; U.S. EPA office of Drinking Water, April 1990 for those compounds)

4. - indicates standard not available for this coumpound

PFJ/vlr/APA/KJQ
[jlv-403-89]
15275-MD

TABLE 3

Soil Sampling Results Summary
North American Tool Corporation
South Beloit, Illinois

Sample Location(1)Q	Sample Depth (ft)	Compound	Concentration (ppm)
SB 03	1-1.5	Tetrachloroethene	<0.050
		1,1,1-Trichloroethane	0.422
		Trichloroethene	0.214
NE	___	1,1,1-Trichloroethane	0.129
		Trichloroethene	0.0526
		Xylenes	<0.050
NW	___	Toluene	<0.050
		1,1,1-Trichloroethane	0.135
		Trichloroethene	<0.050
SE	___	Toluene	<0.050
SW	___	Toluene	<0.050
		1,1,1-Trichloroethane	0.0673
		(2)	
Excavated Soil		1,2-Dichlorobenzene	1.450
		1,2-Dichloroethane	<0.050
		Ethyl Benzene	0.806
		Tetrachloroethene	1.240
		1,1,1-Trichloroethane	1.570
		Xylenes	14.600
		(2), (3)	

<.050 = detected below quantitation limit of .050 mg/kg.
(1) Samples obtained from SB03, and from the NE, NW, SE and SW corners of the soil excavation (Refer to Drawing 15275-B1)
(2) Unidentified compounds also detected
(3) Sample also analyzed for total petroleum hydrocarbons (TPH). Sample contains unknown hydrocarbons. Estimated concentration of TPH is 2190 mg/kg, based on the gasoline standard.

PFJ/vlr/APA/KJQ
[jlv-403-88]
15275.00-MD

TABLE 4

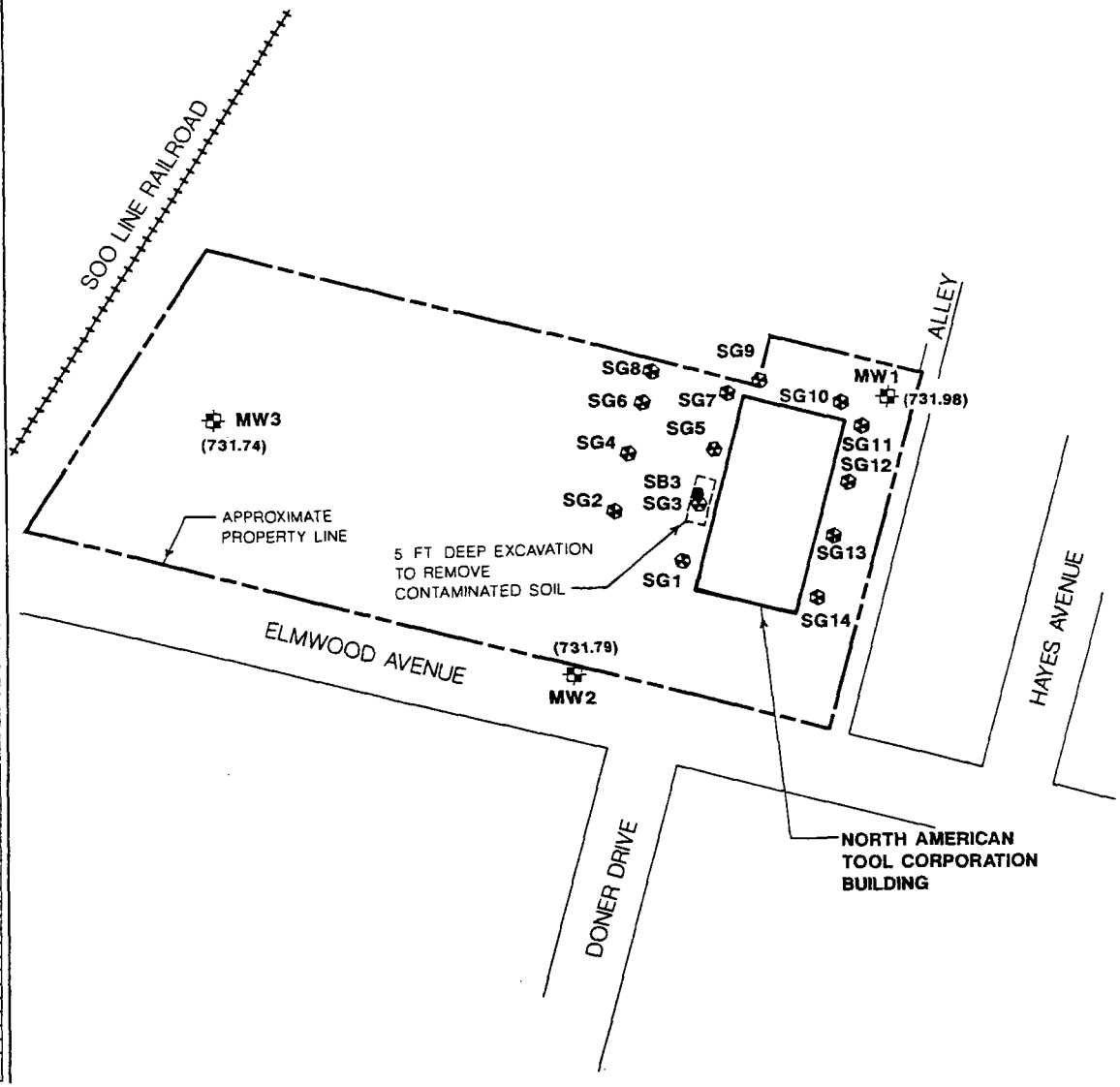
Well Information Summary
North American Tool Corporation
South Beloit, Illinois

Well	Ground[2] Elev. (ft MSL)	TOC[1] Elev. (ft MSL)	August 30, 1990 Total Well[1] Depth TOC (ft)	August 30, 1990 Depth to[1] Water Level TOC (ft)	August 30, 1990 Groundwater Elev. (ft MSL)	October 30, 1990 Depth to[1] Water (ft)	October 30, 1990 Groundwater Elev. (ft MSL)	WELL REDEVELOPMENT, AUGUST 30, 1990 Gallons Purged	pH(S.U.)	Conductivity (umoh/cm)	Temperature (°C)	Comments
MW1	736.83	739.35	23.1	7.18	732.17	7.37	731.98	15	6.71	640	16	Brown
								35	6.85	640	16	Lt Brown
								60	6.71	640	16	Clear
MW2	735.86	738.03	23.2	6.08	731.95	6.24	731.79	15	6.79	630	17	Dark Brown
								35	6.69	610	17	Lt Brown
								60	6.76	610	17	Clear, slight turbidity
MW3	734.92	736.67	22.6	4.07	732.60	4.93	731.74	15	6.73	490	14	Light Brown, sandy
								35	6.70	490	13.5	Light Brown, sandy
								60	6.72	490	13.5	Very Light Brown

Notes:

1. Depths measured from top of well casing.
2. ft MSL indicates ft above Mean Sea Level
   S.U. = standard units

PJ/vlr/APA/KJQ
[jkk-400-36]
12756-MD



LEGEND

SG1	SOIL GAS SAMPLING LOCATION AND NUMBER
SB3	SOIL SAMPLING LOCATION AND NUMBER
MW1 (731.98)	MONITORING WELL LOCATION, NUMBER AND WATER TABLE ELEVATION

NOTES

1. BASE MAP DEVELOPED FROM PLAT OF SURVEY PROVIDED BY R.H. BATTERMAN AND CO., INC. DATED NOVEMBER 22, 1988. REVISED OCTOBER 1, 1990.
2. SOIL GAS SURVEY AND SOIL SAMPLING PERFORMED BY WARZYN ENGINEERING INC. ON AUGUST 29-30, 1990.
3. SOIL SAMPLES FROM THE FOUR CORNERS OF THE 5 FT. DEEP EXCAVATION (APPROXIMATELY 18 FT. X 43 FT.) OBTAINED BY WARZYN ENGINEERING INC. ON SEPTEMBER 10, 1990.
4. WITHIN THE EXCAVATION, A 6 FT. X 6 FT. AREA AROUND SG3 WAS EXCAVATED TO A DEPTH OF 7 FT., AND THE GROUNDWATER WAS SAMPLED BY WARZYN ENGINEERING INC. ON SEPTEMBER 10, 1990.
5. WATER LEVEL MEASUREMENTS PERFORMED ON OCTOBER 29, 1990 BY WARZYN ENGINEERING INC.

north

0 100 200

SCALE IN FEET

WARZYN

SITE FEATURES MAP

SITE INVESTIGATION
NORTH AMERICAN TOOL CORPORATION
SOUTH BELOIT, WINNEBAGO CO., ILLINOIS

1 OF 1

15275 B1

WARZYN

MASTER BLUE PRINT INC. 814935

VARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: SWW APP'D: KAS
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-003(1) SG-03 8/29/90	1609-004(1) SG-03 DUP 8/29/90
1,1-DICHLOROETHENE	1.00	119	118
CIS-1,2-DICHLOROETHENE	1.00	514	499
TRICHLOROETHENE	1.00	17.3	20.9
TETRACHLOROETHENE	1.00	15.0	17.8

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

(1) SAMPLE CHROMATOGRAM CONTAINS UNIDENTIFIED COMPOUNDS.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: [illegible] APP'D: KDJ
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-005 SG-FIELD BLANK 8/29/90	1609-006(1) SG-04 8/29/90
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	1.04
TRICHLOROETHENE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

(1) SAMPLE CHROMATOGRAM CONTAINS UNIDENTIFIED COMPOUNDS.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5365
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: MW APP'D: KDJ
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-007 SG-05 8/29/90	1609-008 SG-06 8/29/90
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

PAGE 5 OF 9
CK'D: SW APP'D: KDJ
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-009 SG-07 8/29/90	1609-010 SG-08 8/29/90
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

PAGE 6 OF 7
CK'D: [illegible] APP'D: KDS
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-011(1) SG-09 8/29/90	1609-012(1) SG-10 8/29/90
1,1-DICHLOROETHENE	1.00	X	3.61
CIS-1,2-DICHLOROETHENE	1.00	X	84.5
TRICHLOROETHENE	1.00	BMQL	18.0
TETRACHLOROETHENE	1.00	36.4	27.2

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

(1) SAMPLE CHROMATOGRAM CONTAINS UNIDENTIFIED COMPOUNDS.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: [illegible] APP'D: KDJ
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-013 SG-11 8/29/90	1609-014 SG-12 8/29/90
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

WARZYN

MADISO
ONE SCIENCE COU
P.O. BOX 53
MADISON, WI 537
(608) 231-47
FAX (608) 231-47

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: MW APP'D: KDJ
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-015 SG-13 8/29/90	1609-016 SG-14 8/29/90
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: MW APP'D: KDJ
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-017 TRIP BLANK 8/29/90
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRICHLOROETHENE	1.00	X
TETRACHLOROETHENE	1.00	X

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

WARZYN

Warzyn Engineering Inc.
One Science Court
Uni[redacted] Resea[redacted]
P.O. Box 5385
Madison, Wisconsin 53705
(608) 273-0440

CHAIN OF CUSTODY RECORD

PROJ. NO. 15275.00

PROJECT NAME: NATCo

LOCATION: South Beloit, Ill

SAMPLERS: (Signature) Thomas J. Dushek

LAB NO. 1609 GHW	DATE	TIME 8/30/90	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS		HNU	REMARKS Soil Gas
1608-000	8/29/90	0900		X	Trip Blank	1	✓		
1608-001	↓	1245		X	SG-01	1	↓	0 ppm	
-002		1300		X	SG-02	1		0	1.5' deep
-003		1315		X	SG-03	1		11-15 ppm	
-004		1320		X	SG-03 DUP	1		11-15 ppm	
-005		1330		X	SG-Field Blank	1		0	
-006		1355		X	SG-04	1		0	
-007		1410		X	SG-05	1		0	
-008		1420		X	SG-06	1		0	
-009		1435		X	SG-07	1		0.5	
-010		1445		X	SG-08	1		0	
-011		1510		X	SG-09	1		3.0	
-012	↓	1530		X	SG-10	1	↓	1.0	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Thomas J. Dushek (GHW 8/30/90)	8/29/90 1810				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for laboratory by: (Signature) [signature]		Date / Time 8/30/90 7:00 AM	

Remarks

SOIL GAS ANALYSIS - CHLORINATED ETHENES

PROJECT MANAGER: R. Hosfeld

WARZYN

Warzyn Engineering, Inc.
Univ... Research Park
O. Box 5385
Madison, Wisconsin 53705
(608) 273-0440

CHAIN OF CUSTODY RECORD

PROJ. NO. 15275.00

PROJECT NAME NATC.o

LOCATION: South Beloit IL

SAMPLERS: (Signature) Thomas J. Dwaluh

LAB NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	HNu	REMARKS
1609 13	8/30/90							
1608014	8/29/90	1555		X	SG-11	1	1.0 ppm	
-015	14	1610		X	SG-12	1	0.8 ppm	
-016	15	1620		X	SG-13	1	0.5 ppm	
-017	16	1630		X	SG-14	1		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Thomas J. Dwaluh	8/29/90 1810				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)		Date / Time	
		Richard H. Williams		8/30/90 9:00 AM	

Remarks

SOIL GAS ANALYSIS - CHLORINATED-ETHENES

PROJECT MANAGER: R. Hosfeld

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: BLH APP'D: KDJ
DATE ISSUED: 9-26-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/KG AS REC'D)	1623-001(1) SB-03 8/30/90
BENZENE	25.0	X
BROMOCHLOROMETHANE	50.0	X
BROMODICHLOROMETHANE	50.0	X
BROMOFORM	50.0	X
BROMOMETHANE	50.0	X
CARBON TETRACHLORIDE	50.0	X
CHLOROBENZENE	50.0	X
CHLORODIBROMOMETHANE	50.0	X
CHLOROETHANE	50.0	X
2-CHLOROETHYLVINYL ETHER	500	X
CHLOROFORM	50.0	X
CHLOROMETHANE	50.0	X
1,2-DIBROMO-3-CHLOROPROPANE	100	X
1,2-DICHLOROBENZENE	50.0	X
1,3-DICHLOROBENZENE	50.0	X
1,4-DICHLOROBENZENE	50.0	X
1,1-DICHLOROETHANE	50.0	X
1,2-DICHLOROETHANE	50.0	X
1,1-DICHLOROETHENE	50.0	X
CIS-1,2-DICHLOROETHENE	50.0	X
TRANS-1,2-DICHLOROETHENE	50.0	X
1,2-DICHLOROPROPANE	50.0	X
CIS-1,3-DICHLOROPROPENE	50.0	X
TRANS-1,3-DICHLOROPROPENE	50.0	X
ETHYL BENZENE	50.0	X
METHYLENE CHLORIDE	250	X
1,1,1,2-TETRACHLOROETHANE	50.0	X
1,1,2,2-TETRACHLOROETHANE	50.0	X
TETRACHLOROETHENE	50.0	BMQL
TOLUENE	50.0	X
1,1,1-TRICHLOROETHANE	50.0	422
1,1,2-TRICHLOROETHANE	50.0	X
TRICHLOROETHENE	50.0	214
TRICHLOROFLUOROMETHANE	50.0	X
VINYL CHLORIDE	50.0	X
XYLENES	50.0	X

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MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: BWF APP'D: KCJ
DATE ISSUED: 9-26-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1623-002 MW-1 8/30/90	1623-003 MW-2 8/30/90	1623-004 MW-3 8/30/90
BENZENE	1.00	X	X	X
BROMOCHLOROMETHANE	1.00	X	X	X
BROMODICHLOROMETHANE	1.00	X	X	X
BROMOFORM	1.00	X	X	X
BROMOMETHANE	1.00	X	X	X
CARBON TETRACHLORIDE	1.00	X	X	X
CHLOROBENZENE	1.00	X	X	X
CHLORODIBROMOMETHANE	1.00	X	X	X
CHLOROETHANE	1.00	X	X	X
2-CHLOROETHYLVINYL ETHER	10.0	X	X	X
CHLOROFORM	1.00	X	X	X
CHLOROMETHANE	1.00	X	X	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X	X	X
1,2-DICHLOROBENZENE	1.00	X	X	X
1,3-DICHLOROBENZENE	1.00	X	X	X
1,4-DICHLOROBENZENE	1.00	X	X	X
1,1-DICHLOROETHANE	1.00	X	16.5	X
1,2-DICHLOROETHANE	1.00	X	X	X
1,1-DICHLOROETHENE	1.00	X	2.15	X
CIS-1,2-DICHLOROETHENE	1.00	X	4.91	X
TRANS-1,2-DICHLOROETHENE	1.00	X	X	X
1,2-DICHLOROPROPANE	1.00	X	X	X
CIS-1,3-DICHLOROPROPENE	1.00	X	X	X
TRANS-1,3-DICHLOROPROPENE	1.00	X	X	X
ETHYL BENZENE	1.00	X	X	X
METHYLENE CHLORIDE	5.00	X	X	X
1,1,1,2-TETRACHLOROETHANE	1.00	X	X	X
1,1,2,2-TETRACHLOROETHANE	1.00	X	X	X
TETRACHLOROETHENE	1.00	1.18	1.10	2.23
TOLUENE	1.00	X	X	X
1,1,1-TRICHLOROETHANE	1.00	X	66.3	1.25
1,1,2-TRICHLOROETHANE	1.00	X	X	X
TRICHLOROETHENE	1.00	X	3.28	X
TRICHLOROFLUOROMETHANE	1.00	X	X	X
VINYL CHLORIDE	1.00	X	X	X
XYLENES	1.00	X	X	X

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P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: BLF APP'D: KDJ
DATE ISSUED: 9-26-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1623-005 MW-3 DUP 8/30/90
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYLVINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	1.78
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	1.14
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	1.00	X

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ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: BLH APP'D: KDJ
DATE ISSUED: 9-26-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1623-006 FIELD BLANK 8/30/90	1623-007 TRIP BLANK 8/30/90
BENZENE	1.00	X	X
BROMOCHLOROMETHANE	1.00	X	X
BROMODICHLOROMETHANE	1.00	X	X
BROMOFORM	1.00	X	X
BROMOMETHANE	1.00	X	X
CARBON TETRACHLORIDE	1.00	X	X
CHLOROBENZENE	1.00	X	X
CHLORODIBROMOMETHANE	1.00	X	X
CHLOROETHANE	1.00	X	X
2-CHLOROETHYLVINYL ETHER	10.0	X	X
CHLOROFORM	1.00	X	X
CHLOROMETHANE	1.00	X	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X	X
1,2-DICHLOROBENZENE	1.00	X	X
1,3-DICHLOROBENZENE	1.00	X	X
1,4-DICHLOROBENZENE	1.00	X	X
1,1-DICHLOROETHANE	1.00	X	X
1,2-DICHLOROETHANE	1.00	X	X
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRANS-1,2-DICHLOROETHENE	1.00	X	X
1,2-DICHLOROPROPANE	1.00	X	X
CIS-1,3-DICHLOROPROPENE	1.00	X	X
TRANS-1,3-DICHLOROPROPENE	1.00	X	X
ETHYL BENZENE	1.00	X	X
METHYLENE CHLORIDE	5.00	X	X
1,1,1,2-TETRACHLOROETHANE	1.00	X	X
1,1,2,2-TETRACHLOROETHANE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X
TOLUENE	1.00	X	X
1,1,1-TRICHLOROETHANE	1.00	X	X
1,1,2-TRICHLOROETHANE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TRICHLOROFLUOROMETHANE	1.00	X	X
VINYL CHLORIDE	1.00	X	X
XYLENES	1.00	X	X

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(608) 2
FAX (608) 2

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: BLH APP'D: KCJ
DATE ISSUED: 9-26-96

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

Warzyn Engineering Inc.
[redacted] Scien[redacted]
U[redacted]ity Research Park
P.O. Box 5385
Madison, Wisconsin 53705
(608) 273-0440

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	VOCs (601/602)	VOCs	REMARKS
15275.00	NATCo				
	LOCATION: South Beloit, IL				
SAMPLERS: (Signature) Thomas J. Druhek					

LAB NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOCs (601/602)	VOCs	REMARKS
1623-001	8/30/90	0900		X	Trip Blank	1	✓		FW, soils
-002		1500		X	MW-1	2	✓		vials pres. w/ HCl
-003		1525		X	MW-2	2	✓		
-004		1540		X	Field Blank	2	✓		
-004		1555		X	MW-3	2	✓		
-005		↓		X	MW-3 DUP	2	✓		
1623-001	8/30/90	1430		X	SB-03	2		✓	1-1.5 Feet

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Thomas J. Druhek	8/30/90 1830				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)		Date / Time	
		[signature]		8/31/90 8:15AM	

Remarks

PROJECT MANAGER: R. Hosfeld

samples delivered to walk in cooler received intact

Distribution: White — Accompanies Shipment; Yellow — Laboratory File; Pink — Coordinator Field Files

NO. 0 3494

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ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NATCO
LOCATION: SOUTH BELOIT, ILLINOIS
C#: 15275.00

CK'D: RWW APP'D: KDJ
DATE ISSUED: 9/24/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L OF SOIL GAS)	1609-001 SG-01 8/29/90	1609-002 SG-02 8/29/90
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

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P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

ANALYTICAL LABORATORY RESULTS
WI LAB CERTIFICATION ID#: 113138300

PROJECT: NORTH AMERICAN TOOL CORP.

LOCATION: S. BELOIT, WISCONSIN

PROJECT #: 15275.00
DATE SAMPLED: 9/10/90
CK'D: KDJ APP'D: KDJ
DATE ISSUED: 10-23-90

LAB NO.	1680-007
SAMPLE DESCRIPTION	EXCAVATION - CONTAMINATED
LEAD, TOTAL	46.0
RCRA CHARACTERISTICS	
FLASHPOINT (°F)	>200
PAINT FILTER TEST (%FREE LIQUIDS)	0
PH (S.U.)	6.87
TOTAL SOLIDS (%)	86.1

RESULTS ARE REPORTED IN MG/KG AS RECEIVED UNLESS OTHERWISE STATED.

METHOD REFERENCE: SW-846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986.

METHOD 7420: LEAD
METHOD 9045: PH
METHOD 9095: PAINT FILTER TEST
METHOD 1010: FLASHPOINT

EPA-600, "METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES", MARCH, 1984.

METHOD 160.3: TOTAL SOLIDS

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MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NORTH AMERICAN TOOL CORP.
LOCATION: S. BELOIT, WISCONSIN
C#: 15275.00

CK'D:KDJ APP'D:KDJ
DATE ISSUED: 10-23-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1680-001 EXCAVATION GROUND WATER 9/10/90
BENZENE	1000	X
BROMOCHLOROMETHANE	1000	X
BROMODICHLOROMETHANE	1000	X
BROMOFORM	1000	X
BROMOMETHANE	1000	X
CARBON TETRACHLORIDE	1000	X
CHLOROBENZENE	1000	X
CHLORODIBROMOMETHANE	1000	X
CHLOROETHANE	1000	X
2-CHLOROETHYLVINYL ETHER	10000	X
CHLOROFORM	1000	X
CHLOROMETHANE	1000	X
1,2-DIBROMO-3-CHLOROPROPANE	2000	X
1,2-DICHLOROBENZENE	1000	X
1,3-DICHLOROBENZENE	1000	X
1,4-DICHLOROBENZENE	1000	X
1,1-DICHLOROETHANE	1000	X
1,2-DICHLOROETHANE	1000	X
1,1-DICHLOROETHENE	1000	1180
CIS-1,2-DICHLOROETHENE	1000	X
TRANS-1,2-DICHLOROETHENE	1000	X
1,2-DICHLOROPROPANE	1000	X
CIS-1,3-DICHLOROPROPENE	1000	X
TRANS-1,3-DICHLOROPROPENE	1000	X
ETHYL BENZENE	1000	X
METHYLENE CHLORIDE	5000	X
1,1,1,2-TETRACHLOROETHANE	1000	X
1,1,2,2-TETRACHLOROETHANE	1000	X
TETRACHLOROETHENE	1000	X
TOLUENE	1000	X
1,1,1-TRICHLOROETHANE	1000	9150
1,1,2-TRICHLOROETHANE	1000	X
TRICHLOROETHENE	1000	X
TRICHLOROFLUOROMETHANE	1000	X
VINYL CHLORIDE	1000	X
XYLENES	1000	X

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P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
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VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NORTH AMERICAN TOOL CORP.
LOCATION: S. BELOIT, WISCONSIN
C#: 15275.00

CK'D:KDJ APP'D:KDJ
DATE ISSUED:10-23-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1680-002 TRIP BLANK 9/10/90
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYLVINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	1.00	X

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BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
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METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

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MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
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VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NORTH AMERICAN TOOL CORP.
LOCATION: S. BELOIT, WISCONSIN
C#: 15275.00

CK'D KDJ APP'D: KDJ
DATE ISSUED: 10-23-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/KG AS REC'D)	1680-003 NORTH EAST EXCAVATION 9/10/90	1680-004 NORTH WEST EXCAVATION 9/10/90
BENZENE	25.0	X	X
BROMOCHLOROMETHANE	50.0	X	X
BROMODICHLOROMETHANE	50.0	X	X
BROMOFORM	50.0	X	X
BROMOMETHANE	50.0	X	X
CARBON TETRACHLORIDE	50.0	X	X
CHLOROBENZENE	50.0	X	X
CHLORODIBROMOMETHANE	50.0	X	X
CHLOROETHANE	50.0	X	X
2-CHLOROETHYLVINYL ETHER	500	X	X
CHLOROFORM	50.0	X	X
CHLOROMETHANE	50.0	X	X
1,2-DIBROMO-3-CHLOROPROPANE	100	X	X
1,2-DICHLOROBENZENE	50.0	X	X
1,3-DICHLOROBENZENE	50.0	X	X
1,4-DICHLOROBENZENE	50.0	X	X
1,1-DICHLOROETHANE	50.0	X	X
1,2-DICHLOROETHANE	50.0	X	X
1,1-DICHLOROETHENE	50.0	X	X
CIS-1,2-DICHLOROETHENE	50.0	X	X
TRANS-1,2-DICHLOROETHENE	50.0	X	X
1,2-DICHLOROPROPANE	50.0	X	X
CIS-1,3-DICHLOROPROPENE	50.0	X	X
TRANS-1,3-DICHLOROPROPENE	50.0	X	X
ETHYL BENZENE	50.0	X	X
METHYLENE CHLORIDE	250	X	X
1,1,1,2-TETRACHLOROETHANE	50.0	X	X
1,1,2,2-TETRACHLOROETHANE	50.0	X	X
TETRACHLOROETHENE	50.0	X	X
TOLUENE	50.0	X	BMQL
1,1,1-TRICHLOROETHANE	50.0	129	135
1,1,2-TRICHLOROETHANE	50.0	X	X
TRICHLOROETHENE	50.0	52.6	BMQL
TRICHLOROFLUOROMETHANE	50.0	X	X
VINYL CHLORIDE	50.0	X	X
XYLENES	50.0	BMQL	X

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MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NORTH AMERICAN TOOL CORP.
LOCATION: S. BELOIT, WISCONSIN
C#: 15275.00

CK'D: KDJ APP'D: KC
DATE ISSUED: 10-23-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/KG AS REC'D)	1680-005 SOUTH EAST EXCAVATION 9/10/90	1680-006(1) SOUTH WEST EXCAVATION 9/10/90
BENZENE	25.0	X	X
BROMOCHLOROMETHANE	50.0	X	X
BROMODICHLOROMETHANE	50.0	X	X
BROMOFORM	50.0	X	X
BROMOMETHANE	50.0	X	X
CARBON TETRACHLORIDE	50.0	X	X
CHLOROBENZENE	50.0	X	X
CHLORODIBROMOMETHANE	50.0	X	X
CHLOROETHANE	50.0	X	X
2-CHLOROETHYLVINYL ETHER	500	X	X
CHLOROFORM	50.0	X	X
CHLOROMETHANE	50.0	X	X
1,2-DIBROMO-3-CHLOROPROPANE	100	X	X
1,2-DICHLOROBENZENE	50.0	X	X
1,3-DICHLOROBENZENE	50.0	X	X
1,4-DICHLOROBENZENE	50.0	X	X
1,1-DICHLOROETHANE	50.0	X	X
1,2-DICHLOROETHANE	50.0	X	X
1,1-DICHLOROETHENE	50.0	X	X
CIS-1,2-DICHLOROETHENE	50.0	X	X
TRANS-1,2-DICHLOROETHENE	50.0	X	X
1,2-DICHLOROPROPANE	50.0	X	X
CIS-1,3-DICHLOROPROPENE	50.0	X	X
TRANS-1,3-DICHLOROPROPENE	50.0	X	X
ETHYL BENZENE	50.0	X	X
METHYLENE CHLORIDE	250	X	X
1,1,1,2-TETRACHLOROETHANE	50.0	X	X
1,1,2,2-TETRACHLOROETHANE	50.0	X	X
TETRACHLOROETHENE	50.0	X	X
TOLUENE	50.0	BMQL	BMQL
1,1,1-TRICHLOROETHANE	50.0	X	67.3
1,1,2-TRICHLOROETHANE	50.0	X	X
TRICHLOROETHENE	50.0	X	X
TRICHLOROFLUOROMETHANE	50.0	X	X
VINYL CHLORIDE	50.0	X	X
XYLENES	50.0	X	X

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NORTH AMERICAN TOOL CORP.
LOCATION: S. BELOIT, WISCONSIN
C#: 15275.00

CK'D:KDS APP'D:KDS
DATE ISSUED:10-23-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/KG AS REC'D)	1680-007(1) EXCAVATION-CONTAMINATED 9/10/90
BENZENE	25.0	X
BROMOCHLOROMETHANE	50.0	X
BROMODICHLOROMETHANE	50.0	X
BROMOFORM	50.0	X
BROMOMETHANE	50.0	X
CARBON TETRACHLORIDE	50.0	X
CHLOROBENZENE	50.0	X
CHLORODIBROMOMETHANE	50.0	X
CHLOROETHANE	50.0	X
2-CHLOROETHYLVINYL ETHER	500	X
CHLOROFORM	50.0	X
CHLOROMETHANE	50.0	X
1,2-DIBROMO-3-CHLOROPROPANE	100	X
1,2-DICHLOROBENZENE	50.0	1450
1,3-DICHLOROBENZENE	50.0	X
1,4-DICHLOROBENZENE	50.0	X
1,1-DICHLOROETHANE	50.0	X
1,2-DICHLOROETHANE	50.0	BMQL
1,1-DICHLOROETHENE	50.0	X
CIS-1,2-DICHLOROETHENE	50.0	X
TRANS-1,2-DICHLOROETHENE	50.0	X
1,2-DICHLOROPROPANE	50.0	X
CIS-1,3-DICHLOROPROPENE	50.0	X
TRANS-1,3-DICHLOROPROPENE	50.0	X
ETHYL BENZENE	50.0	806
METHYLENE CHLORIDE	250	X
1,1,1,2-TETRACHLOROETHANE	50.0	X
1,1,2,2-TETRACHLOROETHANE	50.0	X
TETRACHLOROETHENE	50.0	1240
TOLUENE	50.0	X
1,1,1-TRICHLOROETHANE	50.0	1570
1,1,2-TRICHLOROETHANE	50.0	X
TRICHLOROETHENE	50.0	X
TRICHLOROFLUOROMETHANE	50.0	X
VINYL CHLORIDE	50.0	X
XYLENES	50.0	14600

WARZYN

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VOLATILE ORGANIC COMPOUND RESULTS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NORTH AMERICAN TOOL CORP.
LOCATION: S. BELOIT, WISCONSIN
C#: 15275.00

CK'D:KDJ APP'D:KDJ
DATE ISSUED:10-23-90

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

(1) SAMPLE CHROMATOGRAM CONTAINS UNIDENTIFIED COMPOUNDS.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020.

WARZYN

MADISON
ONE SCIENCE COURT
P.O. BOX 5385
MADISON, WI 53705
(608) 231-4747
FAX (608) 231-4777

TOTAL PETROLEUM HYDROCARBONS
WI LAB CERTIFICATION ID#: 113138300
PROJECT: NORTH AMERICAN TOOL CORP.
LOCATION: S. BELOIT, WISCONSIN
C#: 15275.00

CK'D: KDJ APP'D: KDJ
DATE ISSUED: 10-23-90

METHOD
REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTES", SEPTEMBER, 1986. METHOD 3550.

ASTM, "ANNUAL BOOK OF ASTM STANDARDS", 1983. METHOD D-3328 WITH MODIFICATIONS.

NOTE: THE ANALYSIS OF SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS IS A SCREENING PROCEDURE. ANALYTICAL RESULTS ARE COMPARED AND QUANTIFIED AGAINST KNOWN REFERENCE STANDARD MIXTURES. DUE TO VARIABLES SUCH AS DIFFERENCES IN PETROLEUM PRODUCT FORMULATIONS, WEATHERING AND OTHER ENVIRONMENTAL FACTORS, POSITIVE IDENTIFICATION AS ONE OF THE TARGET HYDROCARBON MIXTURES MAY NOT BE POSSIBLE. THE VALUES REPORTED ARE TENTATIVELY IDENTIFIED WITH ESTIMATED CONCENTRATIONS.

BMQL = DETECTED, BUT BELOW METHOD QUANTITATION LIMIT.
X = ANALYZED, BUT NOT DETECTED.

(1) SAMPLE 1680-007 CONTAINS WHAT APPEARS TO BE A HYDROCARBON FRACTION ELUTING OFF OF THE GAS CHROMATOGRAPH WITH A RETENTION TIME IN THE RANGE OF GASOLINE. THIS UNKNOWN DOES NOT MATCH ANY OF THE REFERENCE STANDARDS. AN ESTIMATED CONCENTRATION OF THE UNKNOWN CALCULATED AGAINST A GASOLINE REFERENCE STANDARD IS 2190 MG/KG.

COMPOUND	REPORTABLE DETECTION LIMIT (MG/KG AS REC'D)	1680-007 EXCAVATION-CONTAMINATED 9/10/90
TOTAL HYDROCARBON AS:		
GASOLINE	5.00	X(1)
KEROSENE	5.00	X
#2 FUEL OIL	5.00	X

Scien[illegible]
Ur[illegible]y Research Park
P.O. Box 5385
Madison, Wisconsin 53705
(608) 273-0440

CHAIN OF CUSTODY RECORD

PROJ. NO. 15275

PROJECT NAME North American Tool Corp.

LOCATION S. Beloit, WI

SAMPLERS: (Signature) Wm Buckus

LAB NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	VOC (1:1 HCl) water	VOC (soils)	Waste Characterization *				REMARKS GW Soil
1680-001	9-10-90	12:00		X	Excavation - Ground Water	4	X						water
-002	↓	09:30		X	Trip Blank	1	X						↓
-003	↓	12:40		↓	North east - excavation	2		X					soil
-004	↓	12:50		↓	North west - excavation	2		X					↓
-005	↓	14:40		↓	South east - excavation	2		X					↓
-006	↓	14:50		↓	South West - excavation	2		X					↓
-007	↓	15:20		↓	Excavation - contaminated	6			X				HNu readings ~100 ppm (11.7 [illegible])

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Wm Buckus	9-10-90 / 17:00			/	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	/			/	
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)		Date / Time	
	/	Kari-Ann Fink		9/11/90 / 11:10am	

Remarks
Kept on ice.

PROJECT MANAGER: R. Horsfeld

* Waste Characterization = pH, Total Solids, Free Liquids, Flash Point, TPH, ~~BETX~~ VOC, Total Lead
[illegible] 9-10-90